RELATIONSHIPS AMONG HIGH SCHOOL CHOIR TEACHERS' SELF DESCRIBED TEACHING PRACTICES AND SIGHT-SINGING SCORES FROM A DISTRICT/ALL-STATE AUDITION EVENT

BY

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ABSTRACT

The purpose of this study was to assess possible relationships among (a) sight-singing scores of secondary choral music students (*N*=396) from the Northeast region of a Midwestern state at a district/all-state audition event and (b) self-reported sight-singing instructional methods employed by their teachers (*N*=44), both across the school year and in period of time prior to the district/all-state audition. Teacher participants completed a survey regarding the following: (a) teacher demographic data, (b) school demographic data, and (c) teaching practice. Survey data were compared to sight-singing scores using a Pearson Correlation. Weak positive relationships were discovered between student scores and (a) teacher understanding of the audition process (*r*= .33) and (b) daily sight-singing instruction (*r*= .29). No significant relationships were found among student sight-singing scores and reported sight-singing instructional methods. Results were discussed in terms of positive and negative correlations, limitations of the study, and suggestions for further research.

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Chapter 1

Introduction

"We should read music in the same way that an educated adult will read a book: in silence, but imagining the sound." –Zoltán Kodály

A primary goal of any educational endeavor is to develop independent learners capable of solving problems. Music literacy, which includes sight-reading and sight-singing, involves musical independence and problem solving skills. In his book *Comprehensive Choral Music Education*, John Hylton describes sight-singing as the ability of an individual to take a piece of choral music and accurately produce the pitches, rhythms, and expressive markings without the aid of a piano or external instrument (1994).

This global description can be broken down further when individual aspects of sight-singing are examined. W. G. McNaught (1899) summarizes some late Nineteenth Century beliefs about sight-singing. He concludes that there are three main areas of concentration: (a) the memory of pitch, either permanent (absolute pitch) or temporary, (b) interval effects, and (c) the sense of key. Raymond Mosher (1925) finds seven factors that contribute to an individual's ability to sight-sing: (a) an understanding of music notation and symbols, (b) the ability to recognize scales, chords, and intervals, (c) the ability to understand rhythmic value, (d) the ability to

name well known melodies at sight, (e) the ability to complete harmonic dictation, (f) the ability to complete rhythmic dictation, and (g) the ability to complete melodic dictation. In addition, Rose Dwiggins (1984) focuses on the following concepts related to sight-singing: (a) discrimination of notation and knowledge of music signs, (b) chord analysis, and (c) pitch discrimination. Furthermore, James Middleton (1984) believes that sight-singing can be broken down into two sets of vocabularies: (a) rhythmic and (b) tonal.

Development of Sight-singing Instruction

According to Allan Atlas (1998), Medieval music theorist Guido d'Arezzo (c. 991-after1033) found young singers were able to learn new melodies at a higher rate if they sang a group of syllables that related to certain pitches. These syllables, *ut, re, me, fa, sol, la,* became the first solmization system on record. Over 600 years later, a four-syllable solmization system was common in England and found favor in the *Bay Psalm Book,* (1651) of Puritan New England. This method used *fa, so, la,* and *mi*, and was aptly named *fasola*. This method remained popular in the United States until the mid-nineteenth century (Keene, 1982).

In 1834, the Bostonian singing instructor Lowell Mason, wrote the book *Manual of the Boston Academy of Music, for Instruction in the Elements of Vocal Music, on the System of Pestalozzi*. With this text, Mason outlined the use of a seven-syllable solfege method and advocated the use of rote teaching prior to instruction in music literacy. The sound before sight concept was also paramount to Zoltán Kodály. The Kodály method uses folk songs and adds solfege syllables to aid

in the familiarity of pitch relationships. This method also encourages the use of hand-signs representing solfege syllables (Demorest, 2001).

School choirs of the mid-nineteenth century in the United States were instituted primarily as a means of teaching sight-singing (Demorest, 2001). By the early twentieth century, these early music literacy courses had been replaced by glee clubs and other choruses often comprised of the entire student body. By the 1920s, much of the previous emphasis on singing had been replaced by interest in band and orchestra (Kegerreis, 1970). More recent trends in music education have indicated a resurgence of interest in music literacy as evidenced by (a) the mass of published materials on sight-singing, (b) the increase of sight-singing in contests and festivals, and (c) an emphasis on standards and assessment (Demorest 2001).

To this end, the Music Educator's National Conference has made reading and notating music one of their nine standards. Standard 5b states, "Students who participate in a choral or instrumental ensemble or class sight-read, accurately and expressively, music with a level of difficulty of 3, on a scale of 1 to 6" (1994).

Sight-singing Instruction in the Classroom

It seems apparent that a choir director needs to devote rehearsal time to teach the necessary skills to develop sight-singing knowledge and practice. However, devoting rehearsal time can be a daunting task if one is faced with an extensive performance schedule. Middleton (1884) believes that choir directors and performers alike find instruction in music literacy beneficial:

> Music-reading literacy is well worth the time and effort, and that schools and directors can provide the most beneficial choral experiences to student by giving them access to music knowledge, concepts, and skills – not the least of which are music-reading skills.

Some choir directors believe the process of learning sight-reading skills improves their choir's overall intonation (Floyd & Bradley 2006). An argument has also been made that a connection exists between reading language and reading music. Zinar (1976) explores some related research and concludes there are certain parallels between reading words and reading music, but those parallels do not indicate that reading music helps one to read words. However, music may satisfy a student's emotional and aesthetic needs, and in turn improve academic ability. Butzlaff (2000) suggests that the apparent parallels between reading a musical score and reading language are in need of future study.

Peggy Bennet (1983) argues however, that class instruction and practice may not teach individuals to sight-sing. She finds students are very quick to imitate the pitches they hear, often within a fraction of a second. This imitation can lead an experienced choir director to believe that the entire choir can accurately sight-sing, when it may be as few as one or two students leading the group. Research literature has also found group success does not necessarily indicate individual sight-singing ability (Nolker, 2006).

However, the inclusion of an individual sight-singing audition gives further incentive for a choir director to teach music literacy. According to Matthew Armstrong (2001):

> With proper guidance and instruction, the challenges of teaching the choral singer to sight-read effectively can be met. By including choral sight-reading as a part of the adjudications process, we afford ourselves as choral directors an incentive to remain accountable, and provide ourselves and our students an opportunity to benefit from the expertise of other professional musicians (p. 29).

Many states and regions now include a sight-singing portion to their all-state auditions.

NEKMEA auditions

In 2002, the Northeast District of the Kansas Music Educator's Association (NEKMEA) changed the format of its district and all-state choir audition procedures by adding a sight-singing portion. This sight-singing portion of the audition, accounts for one-ninth (11.1 %) of the students' final score. The remaining score (88.9%), is attained by singing passages from literature. According to Marie Lerner-Sexton, author of the NEKMEA sight-singing audition samples, sight-singing was added to the audition procedures to promote better teaching and to encourage individualized sight-singing instruction. A by product of this strategy may be district and all-state choruses that are better able to understand the musical score to a higher degree, rather than just reproduce pitches and rhythms.

Purpose

The purpose of this study is to assess possible relationships among (a) sight-singing scores of secondary choral music students from the Northeast region of a Midwestern state (*N*=397) at a district/all-state audition event and (b) self-reported sight-singing instructional methods employed by their teachers (*N*=44), both across the school year and in the period of time prior to the district/all-state audition. To that end, the following research questions guide this investigation:

(a) What are the self-reported demographics of these participating teachers?

(b) What are the self-reported sight-singing teaching practices and opinions of these participating teachers?

(c) What are the results of the sight-singing audition disaggregated by score, voice, and school?

(d) What, if any, relationships exist among teacher survey responses and student sight-singing scores?

Definitions

The *American Heritage College Dictionary* (1993) defines sight-reading: "To read or perform (music for example) without preparation or prior acquaintance." In the current literature, the terms sight-singing and sight reading are often used interchangeably. For the purpose of this study, these terms will be broken down into the following definitions.

Sight-reading

The performance of music, at sight, on an instrument or in an instrumental ensemble.

Sight-singing

The performance of music with an individual voice or in a vocal ensemble without the aid of an instrument.

Aural skill

A more encompassing list of skills including: sight-reading, sight-singing, melodic dictation, and error detection.

Solfege

A system using a set of syllables (*do re mi fa so la ti)* to denote scale degree or location of a note on a staff (Demorest 2001). Solfege has four different sub-classes: (a) Fixed *do*, places *do* on the pitch "C" regardless of key or tonality. (b) Movable *do* places *do* on the on the tonic of any key with a major tonality. (c) *Do*-based minor places *do* on the tonic of any minor key. (d) *La*-based minor places *la* on the tonic of any minor key (Myers 2008).

Numbers

Arabic numerals used to indicate scale degree in a major or minor key.

Neutral syllable

Any vowel or combination of vowel and consonant (e.g. "la") used to sing a passage. This syllable has no relation to scale degree (Myers 2008).

Chapter 2

Review of Literature

Much research has been done pertaining to sight-reading and sight-singing. However, research on sight-singing within a district/all-state audition context is quite limited.

This chapter reviews research literature concerning sight-reading and sight-singing in five sections. The first section explores the psychology of sight-reading and sight-singing. The second section examines current practices in sight-singing instruction. The third section focuses on the effectiveness of sight-singing strategies. The fourth section addresses predictors of sight-singing success. The final section of this chapter discusses studies pertaining to adjudicated sight-singing.

Psychology of Sight-reading and Sight-singing

Sergent, Zuck, Terriah, and MacDonald (1992) used positron emission tomography (PET) and magnetic resonance imaging (MRI) to map portions of the brain used by professional pianists (N=10) when sight-reading a score. Results indicated that the area of the brain activated by sight-reading a piano score was located in the superior part of the supramarginal gyrus, a location next to, but distinct from, portions of the brain that interpret words that are read. Sergent, et al. concluded that sight-reading by these professional pianists entailed spatial analysis of pitches notated on a musical staff, as opposed to feature analysis typically associated with reading words.

Gromko (2004) investigated correlations between high school woodwind players' (*N*=98) sight-reading abilities, as measured by the *Watkins-Farnum Performance Scale,* and (a) tonal and rhythmic audiation, as measured by the *Advanced Measures of Music Audiation,* (b) spatial orientation, as measured by two subtests from the *Kit of Factor-Referenced Cognitive Tests,* (c) spatial visualization, as measured by the *Schematizing Test,* and (d) reading comprehension, and math comprehension as measured by the *Iowa Tests of Educational Development.*. Results determined that among these participants, sight-reading had a positive correlation with cognitive skills that included spatial-temporal reasoning, visual perception, audiation, and reading comprehension.

Kornicke (1992) completed a study examining factors relating to sight-reading skills, as measured by a researcher constructed sight-reading test, among college pianists (*N*=73) compared to the same students' (a) sight-reading experience, (b) aural imagery, (c) locus of control, (d) field independence and dependence, and (e) personality traits as indicated by the *Myers-Briggs Type Indicator*. Results of this study indicated that aural imagery, sight-reading experience, and field independence together correlated positively to sight-reading success. In addition, certain Myers-Briggs personality traits were related to success in different aspects of piano sight-reading: (a) thinking/feeling with pitch accuracy, (b) sensing/intuition with tempo, (c) extroversion/introversion with shaping phrases, and (d) perception with accuracy in performance of rhythms.

Jacobssen (1942) studied the eye movements of adult and sixth grade music readers (*N*=37) with varying backgrounds by taking photographs of the participants' eyes at regular intervals while they sight-sang a vocal music score. Results suggested speed and accuracy of sight-singing was related to the number and duration of fixation pauses and the number of regressions. Participants who kept their eyes moving and avoided looking back were more successful at sight-singing.

Goolsby (1994a, 1994b) published two studies with the same participants that measured the eye movements of (*N*=24) graduate music students while they sight-sang a single line melody. Participants were divided into skilled (*n*=12) and less-skilled (*n*=12) groups as determined by the *Belwin-Mills Singing Achievement Test*. A computerized eye movement detection device determined that skilled sight-singers were able to look farther ahead in the notation and return to the point of performance in the music. Less-skilled sight-singers' eyes tended to fixate for longer periods of time and generally remained at the point of performance. Goolsby concluded that sight-singing included the perception of rhythm and pitch because the notation had to be processed and understood prior to performance.

Knox (2003) examined mistakes, or miscues, made by vocalists (*N*=8) while sight-singing and reading text. He suggested that sight-singing utilized the same mental processes and cognitive strategies as reading, and that sight-singing and reading words formed a semiotic system.

Scripp (1995) conducted a longitudinal study of undergraduate music majors (*N*=20), both voice majors (*n*=9) and non-voice majors (*n*=11), enrolled in a sight-

singing course over a period of two years. Students beginning the course generally had poor error detection and sight-singing skills and were unable to articulate the music reading processes they used. New cognitive developments occurred when the students were able to sight-sing melodies and develop an understanding of music reading as a problem solving process. Therefore, Scripp concluded that performing music literature alone did not provide the cognitive development necessary to develop music reading skill.

Current Practices in Teaching Sight-singing

In 2004, Demorest conducted a web-based survey of self-selected choir directors (*N*=272) who commented on the following topics: (a) time spent on sight-singing, (b) preferred methods and materials, (c) what methods should include, (d) the use of individual assessments, and (e) the role sight-singing contest played in states that require it compared to those that do not. Results indicated responding teachers spent an average 9.5 minutes per rehearsal on sight-singing instruction. The preferred method (64%) of pitch reading was movable *do*. Other methods included the use of numbers (21%) and the use of fixed *do* (15%). The remaining respondents used some other method. The preferred means for teaching rhythm was counting (47%). The remainder (53%) used another method including neutral syllables, *ta-ti-ta*, and *ta-ti-to*.

Responses to rhythm methods were much more varied than those of pitch. The majority of responding teachers said they preferred to make their own materials followed by the use of octavos, hymnals, and specific sight-singing methods.

When considering new sight-singing materials, teachers preferred in descending order of frequency: (a) the material was graded for difficulty, (b) the material included minor examples, (c) the material provided means for assessment, (d) the material had separate rhythm and pitch activities, (e) the material included information on theory, (f) the material included a method for teaching, (g) the material was drawn from existing literature, (h) the material included modes. Most directors (83%), reported they included some sort of assessment in their teaching. Of those teachers who reported regular sight-singing assessments, almost half (47%) preferred formal to informal assessments. Preferred procedures for assessment were as follows: (a) students performed alone, (b) students performed in quartets, and (c) students used a combination of solo and quartet performance.

Brendell (1996) studied the instructional practices of 33 high school choir classes by evaluating video and audio taped observations. Results showed that participating directors spent an average of 22.23% of class periods on sight-singing instruction. This reported percentage was nearly double the percentage of time spent on vocal warm-ups.

Floyd and Bradley (2006) looked at teaching strategies common among choir directors (*N*=24) considered to have successful sight-singing groups. They found teachers of these successful sight-singing ensembles used a combination of self-made exercises and methods books, and spent an average of 18% of rehearsal time on sight-singing instruction. The most popular system of sight-singing in this study was some form of movable *do* (75%). Choir directors (66%) also used some sort of

pitch targeting in the form of a pitch ladder, for example, where the teacher would point to random solfege syllables and have the students sing the specified pitches.

Myers (2008) conducted a survey among college choir directors (*N*=414) from the Southern Division of the American Choral Director's Association. The survey was designed to elicit conductor and institution demographics, frequency of sight-singing instruction, attitudes about sight-singing instruction, and tools for sight-singing assessment used. Among respondents, 64.5% reported teaching sight-singing to their ensembles and 93.4% reported a belief that sight-singing instruction should be a part of regular rehearsals. Only 27.1% of respondents reported having a measure in place to assess their ensemble's sight-singing abilities.

Kuehne (2007) surveyed Florida middle school choir directors (*N*=152) about their sight-singing instructional practices. Results showed most choir directors (52.63%) used a published sight-singing method while many (36.84%) preferred to make their own materials. Movable *do* (79.61%) was the pitch system most commonly used. Some respondents (7.24%) had begun to use some type of computer software to aid sight-singing instruction. McClung (2001) found movable *do* was the most prominent system used in choral rehearsals across a six-state region among high school all-state choristers (*N*=2,115).

Von Kampen (2003) surveyed Nebraska choral educators (*N*=201) to determine practices and reasons for inclusion of sight-singing instruction. Less than half (48%) of responding used a traditional method for teaching sight-singing. Von Kampen also disaggregated directors' reported attitudes about sight-singing

instruction according to: (a) school size, (b) school location, (c) directors' sex, (d) directors' years of teaching experience, and (e) directors' highest level of education. Only school size and location in the state were found to be predictors of positive attitudes toward sight-singing instruction.

Snider (2007) examined the practices of (*N*=50) responding Kansas choral educators. Most respondents (84%) reported teaching sight-singing in rehearsals. The most common method reported for teaching pitch relationships was movable *do*.

Sight-reading and Sight-singing Strategies

A number of studies have examined various sight-singing strategies in relation to particular age groups. Hutton (1953) examined the use of audio-visual materials to supplement sight-singing instruction among fourth grade students (*N*=40). The control group was given sight-singing instruction without the aid of visual materials. The experimental group was given instruction that included the use of flash cards, musical games, and projected slides. The experimental group scored significantly higher on a sight-singing test. Hutton concluded that the use of audio-visual materials sped up the sight-singing learning process for fourth graders.

Rogers (1996) investigated the use of colored notation as a means to improve first and second grade students' (*N*=134) music reading abilities. The experimental group was given regular instruction with rhythms notated in color. The control group was given identical instruction except the rhythms were notated in black. The experimental group scored significantly higher on the rhythm portion of the Primary

Measures of Music Audiation test than the control group. Colored notation also had a positive affect on the students' reported enjoyment of the task.

Gregory (1972) found no significant differences between rhythmic notation variables on a sight-reading test with seventh through twelfth grade (*N*=63) clarinet players. The four notation variables were: conventional spacing, conventional spacing with the counts indicated, spacing appropriate to duration of the note, and unconventional notation using elongated note heads with no stems.

Bebeau (1982) investigated both traditional and experimental methods for teaching rhythm among third graders (*N*=107). A traditional methods group was given instruction in counting rhythms while clapping, while the experimental methods group was given instruction in a researcher designed "speech-cue" method. This speech-cue method used words or phonemic syllables for each different rhythm encountered. Results indicated that the experimental group scored a higher mean, however, the difference between the two groups was not statistically significant.

Martin (1991) explored the use of hand-signs, solfege syllables, and letter names with first grade students. Participants (*N*=65) were divided into three treatment groups: (a) group 1 echoed solfege syllables given by the teacher, (b) group 2 echoed solfege syllables given by a teacher and were instructed in the use of hand-signs (c) and group 3 echoed solfege syllables, used hand-signs as well as viewed letter representations of the pitches. Sight-singing skill was measured by the *Metropolitan Readiness Test*, the *Primary Measures of Music Audiation*, and a series

of three researcher constructed sight-singing tests. Results showed no method was significantly more effective at teaching first graders to sight-sing.

Bluestine (2007) studied the effect of familiar and unfamiliar tonal patterns on the sight-singing and sight-reading achievement of third, fourth, and fifth grade students (*N*=100). Participants were divided into four groups: (a) solfege instruction with student echoing entire melodic patterns, (b) solfege instruction with students echoing individual pitches within patterns, (c) solfege instruction with students echoing entire patterns followed by individual pitches, and (d) solfege instruction with students echoing individual pitches followed by entire patterns. Following 32 sessions lasting 20 minutes each, participants were given the *Generalization-Symbolic Test* and a researcher designed sight-singing test. Results showed no significant differences in scores between groups with familiar pattern training and groups with unfamiliar pattern training. In addition, the order in which they were presented had no significant effect. Bluestine also concluded that due to a very low correlation between individual sight-singing and sight-reading scores, that the skills are unrelated.

Michaelis (2006) studied the effect of timed drills on music reading fluency among elementary string students (*N*=179) divided into experimental and control groups. Both groups attended regular music classes and the experimental group spent extra time completing timed note-reading worksheets. The experimental group scored significantly higher than the control group on five out of six measures on the post-test.

Some studies have explored the use of technology in sight-singing instruction. Hammer (1963) examined the effectiveness of the use of a tachistoscope to improve sight-singing ability among fourth grade students (*N*=26). The examiner used an overhead projector to place a tonal pattern on a screen for a prescribed amount of time, from ½ second to 1/100 of a second. The patterns were then performed in random order at the 1/100 of a second time. Use of the tachistoscope was found to be effective in improving sight-singing among students who had low I.Q., but had little effect the sight-singing abilities of students with middle and upper I.Q.

Other studies used computer software as the focus of research. Lorek (1991) compared the results of computer-based vocal analysis software to the results of a panel of sight-singing instructors. The vocal analysis software was found to be consistent with the instructors' judgments. Platte (1981) studied the effects of the computer program *Melodious Dictator* on university choral students' (*N*=41) sight-singing abilities. Results indicated no significant differences in sight-singing abilities among students receiving computer training and those who did not.

Ozeas (1991) examined the effects of the computer program *Perceive* on university students' (*N*=58) abilities to identify intervals, sing intervals, and sight-singing. A control group was given traditional instruction while the experimental group was instructed to use *Perceive* without traditional instruction. Results indicated that student given traditional instruction produced significantly greater improvement on sight-singing than the computer training only group.

Ewers (2004) examined the use of *Music Lab: Melody* as a supplement to classroom instruction among freshman and sophomore high school choir members (*N*=31). A control group was given traditional instruction while the experimental group received traditional instruction as well as 10 sessions of 15 minutes with the computer program. Students in the experimental group showed significant gains on a sight-singing evaluation while the control group showed no significant improvement.

A study by Anderson (1981) compared two groups of fourth graders (*N*=40), those who used tape-recorded aural models and a control group. Results found no significant difference between the experimental group and the control group. Anderson suggested that under the parameters described in this study, listening to a tape was not a effective means for teaching children how to sight-read and play correctly. He also found that practice time had little effect on student ability to sight-read and perform correctly.

Stewart (2007) examined the effects text sound preparation had on the text and pitch accuracy of middle school aged students (*N*=80). The control group was given a series of daily melodic phrases with text over three weeks. The experimental group was given the same melodic phrases but included additional practice with the text. The text accuracy scores of the experimental group increased significantly while the text accuracy scores of the control group decreased. The pitch accuracy scores for both groups showed an insignificant decrease.

Benton (2002) compared the effects of metacognition on middle school students' (*N*=78) sight-singing achievement and attitudes toward sight-singing instruction. Both treatment and control groups were given forty lessons using *The Sight-singer* by Aubrey Snyder. The treatment groups were given activities in the following areas: (a) think-aloud activities with partners, (b) self-assessment activities, and (c) self-reflection activities. Among the seventh-grade participants, the control group scored significantly higher on a posttest. However, the treatment group demonstrated more positive attitudes about sight-singing. Among the eighth-grade participants, neither group scored significantly higher on a sight-singing posttest. The eighth grade treatment group also demonstrated more positive attitudes about sight-singing instruction.

Lucas (1994) examined the relationship between context and sight-singing achievement among middle school choral students (*N*=95). Three harmonic contexts, (a) melody only, (b) piano harmony, and (c) vocal harmony, were examined using middle school students as participants. Results showed that the melody-only context was the most effective way to practice sight-singing. Sheldon (1998) combined contextual sight-singing and aural skills training to examine their effects on error detection. Undergraduate music majors (*N*=30) were divided into two groups. Group 1 was given 50 minutes of sight-singing and ear training a week for 11 weeks. Group 2 served as a control. Results showed the experimental group was significantly better at error detection than the control group.

Killian (1991) and Kostka (2000) also studied the effects of error detection. Killian found that among middle school students (*N*=75), low achieving sight-singers improved their error detection abilities after training significantly more that medium and high scoring singers. Among undergraduate piano majors (*N*=69) Kostka found no significant differences in the sight-reading abilities between three treatment groups: (a) error-detection practice while playing the notes silently on a keyboard, (b) playing the notes silently only, and (c) unguided practice as a control. Boisen's (1981) middle school and high school participants (*N*=2,207) were better able to detect errors in a sample when a melodic context was present.

Cassidy (1993) compared five different treatment groups of elementary education majors (*N*=91). These groups were: echo singing combined with (a) solfege with hand-signs, (b) solfege alone, (c) letters of the notes, (d) "la" as a neutral syllable, and (e) a control group. Comparisons of pretest and posttest data yielded significant improvement between the solfege with hand-signs and solfege only groups when compared to the letters of notes, neutral syllable and control groups, indicating the effectiveness of solfege with hand signs and solfege alone. Singing the letters of the notes was not effective. Cassidy found this result surprising since the letters could be considered the same mental process as solfege with different names. No group showed a significant difference on accuracy of pitch while singing a children's song.

In a 2004 study, Henry compared two groups of inexperienced high school singers (*N*=67) to determine the effects of targeted pitch skills using familiar and

unfamiliar melodies. Targeted pitch skills were defined as learning intervals and pitch relationships prior to attempting to sing them in written music. When using familiar melodies to teach pitch skills, students would learn intervals by relating them to popular songs. Results indicated a significant improvement in scores from both groups. However, one group was not significantly more effective than the other.

Parker (2007) conducted a study in which high school students (*N*=29) were placed in peer teams to determine effects on sight-singing attitudes and abilities. The data from skill tests, knowledge tests, and a student survey indicated a significant increase in sight singing skill as well as an increase in student self-reported confidence in the following areas: the ability to understand musical concepts, the ability to count rhythms, and confidence in small group performance. There was no significant increase in students' confidence in performing correct pitches in a new melody. Parker concluded that a team-based model for teaching can be an effective method if the teacher is willing to understand the process for establishing the model.

Demorest and May (1995) compared the sight-singing success of individual students (*N*=414) from four Texas high schools relative to the use of fixed *do* and movable *do* sight-singing systems. They found a significant difference between the two systems, contrary to some previous research. Students who used moveable *do* were found to have significantly higher scores on sight singing tests. However, the authors of the study attributed this finding to other differences among the two

groups. Researchers also found a strong correlation between other factors and sight-singing success: (a) the number of years a student was in choir, (b) number of years playing the piano, and (c) instrumental and vocal lessons.

Demorest (1998) conducted a study in which students (*N*=306) were drawn from six Washington State high schools to determine if students given regular individual testing would score higher on sight-singing tests than those students given class instruction alone. Individual testing was found to be an effective way to increase scores in a classroom setting.

Kanable (1969) examined the effectiveness of individual programmed instruction when compared to classroom teaching with high school aged participants (*N*=30). The experimental group was given a taped program containing practice exercises and theoretical concepts. After twelve 50-minute sessions, scores were taken and compared. Individual programmed instruction was found to be less effective than classroom teaching, but the differences were not statistically significant.

Floyd (2007) investigated the effects of diatonic and pentatonic training on the sight-singing abilities of (*N*=50) elementary education majors. Participants were divided into three groups: diatonic training, pentatonic training, and a combination of both. Results of a post-test determined that all three groups improved their scores but no significant differences existed between the three groups.

McClung (2008) investigated the effects of hand-signs on high school choristers' (*N*=38) sight-singing abilities. Participants all had extensive training in

the use of hand-signs. Participants were divided into two groups. Group 1 used hand-signs while sight-singing and group 2 did not use hand-signs. Results showed no significant differences between groups. McClung concluded that hand-signs may not be effective for all singers, but may benefit those with certain learning characteristics.

Brown (2001) studied the effectiveness of movable *do* and fixed *do* in the sight-singing of diatonic, modulatory, chromatic, and atonal melodies. Participants were undergraduates (N=70) enrolled in a music theory course. Results suggested that the movable *do* group was significantly more effective on the performance of chromatic music. The fixed *do* group was found to be significantly more effective on the performance of atonal passages and passages with a high difficulty level. The overall difference in sight-singing achievement between the two groups was not found to be significant.

Henry and Demorest (1994) compared individual sight-singing abilities among high school students' (N=97) from two schools. One school used a "fixed do" system and the other used a "movable do" system. Both choirs had received outstanding sight-singing ratings at a state contest for at least three years. The study determined that there were no significant differences between the two groups. Examinations of individual scores indicated that overall group success was not a solid indicator of individual sight-singing ability.

Predictors

Various studies have found particular factors that appeared to be predictors of sight-reading and sight-singing success. Colwell (1963) conducted a study in Sioux Falls, South Dakota, in which approximately 4000 fifth through twelfth-grade instrumental and choral students were tested on their ability to read music as measured by the *Aliferis Music Achievement Test*, the *Farnum Music Notation Test,* and the *Knuth Achievement Tests in Music.* Instrumental students scored on average higher than vocal students, while students with a background in piano, in particular, evidenced the highest level of sight-singing achievement.

Tucker (1969) also found instrumental music experience a significant predictor of sight-singing success among high school seniors (*N*=120) who had choral and/or instrumental experience, as measured by the (a) *Wing Standardized Test of Musical Excellence,* (b) the *Kwalwasser-Dykema-Holmes Test of Musical Aptitude,* (c) the *Gordon Index of Musical Insight,* (d) *Musical Notation and Discrimination,* (e) *Do You Know Your Musical Signs,* and (f) the *Kyme Test of Aesthetic Judgments.* On the basis of participants' demographic data, he developed a list of seven levels of background experience that correlated positively with sight-singing success. In descending order of positive correlation, the following experiences and combinations of experiences were predictive of sight-singing success among these participants: (a) students with at least six years of piano lessons and vocal and instrumental experience, (b) students with at least six years of piano lessons and instrumental experience, (c) students with at least six years of piano

lessons and vocal experience, (d) students with instrumental experience, (e) students with vocal experience, (f) students with general music experience only, and (g) students with no musical experience.

Luce (1965) examined possible correlations between instrumental students' (*N*=98) sight-reading and ear-playing abilities as well as other selected factors. He found a positive relationship between the ability to sight-read and the ability to reproduce a heard melody on an instrument. Other positive relationships predictive of sight-reading and ear-playing success were the students' leadership status and the students with reported goals for music achievement.

McPherson (1994) studied factors relating to high school instrumentalist's (*N*=101) sight-reading abilities. Results indicated a low correlation between sight-reading ability and ability to perform repertoire. In addition, rhythm was found to be the greatest source of sight-reading errors. He concluded that successful sight-readers among participants in this study exhibited four major abilities: (a) the ability to interpret key and time signatures, (b) utilization of a mental rehearsal period prior to a sight-reading attempt, (c) maintaining concentration throughout the performance, and (d) the ability to monitor the performance and evaluate and correct errors.

Two studies investigated factors that led to success in university students' ability to sight-read. Elliott (1982) examined seven variables in relation to sight-reading abilities of college wind instrumentalists (*N*=32). Those variables were: (a) technical proficiency, (b) rhythm reading ability, (c) sight-singing ability, (d) grade

point average, (e) music theory grades, and (f) performance jury grades. Results showed that ability to read rhythm was the best predictor of high sight reading scores. Rodeheaver (1972) found that among freshman music majors (*N*=260), involvement in activities that required comprehension of written music had a significant positive influence on sight-reading ability.

Hargiss (1962) compared the sight-singing abilities of university elementary education majors (*N*=64) under two conditions: (a) those who received piano instruction alone, and (b) those who received sight-singing training as part of piano instruction. Results showed students who had sight-singing training combined with piano instruction scored significantly higher on a performance test in sight-singing than those who had received piano training alone.

Daniels (1985, 1986) found nine factors predictive of schools and programs (*N*=20) most likely to have successful sight-singers. These factors were: (a) the ethnicity of the students, (b) a large number of students with a piano in their home, (c) rural settings, (d) occasional use of rote teaching, (e) a large percentage of state-choir participants, (f) a large number of students with instrumental experience, (g) a large high school, (h) and a teacher who believed in the importance of sight-singing. Only one of these variables was curriculum based: the occasional use of rote teaching, leading Daniels to the conclude that successful sight-singing is influenced more by school demographics, students' backgrounds, and teacher belief in the efficacy of sight-singing instruction, than by instructional methods.

Killian & Henry (2005) looked at certain demographic relationships characteristic of high school singers (*N*=198) with high scores on sight-singing tests. High accuracy sight-singers were significantly more likely to: (a) hold membership in an honor choir, (b) take private voice or piano lessons, (c) play an instrument, (d) play as a member of an instrumental group, (e) practice sight-singing outside of class, and (f) have a teacher who emphasizes the importance of sight-singing.

Harrison (1990) studied correlations between musical aptitude, academic ability, music experience, and undergraduate grades in sight-singing abilities of music students (*N*=208) in a freshman music theory course. The strongest positive correlations predicting successful sight-singing were academic ability and music experience.

Harrison, Asmus, & Serpe (1994) studied the relationship between (a) musical aptitude, (b) academic ability, (c) music experience, and (d) motivation and the aural skills of university music theory students (*N*=142). Musical aptitude, academic ability, and music experience were found to be predictors of success in aural skill development. Student motivation did not appear to be predictive of aural skill achievement.

Thostenson (1967) examined correlations between sight-singing and melodic dictation with (*N*=147) undergraduate freshman. A strong positive relationship was found to exist between these two factors. Additionally, for these participants, prior knowledge had an effect initially, but this correlation diminished over time with training. Norris (2003) also investigated possible correlations between sight-singing

ability of freshman university students and the ability to accurately complete melodic dictation. Participants (*N*=41) completed a pre-test, and following a semester of an aural skills class, completed a post-test. Melodic dictation was found to be a moderately strong predictor of sight-singing achievement.

Larson (1977) examined possible correlations between three factors: (a) melodic error detection, (b) sight-singing, and (c) melodic dictation among junior and senior music majors (*N*=204). Participants were given diatonic, chromatic, and atonal passages to sight-sing. A stronger positive relationship was found between error detection scores and melodic dictation scores than between error detection and sight-singing scores.

Formal Adjudicated Sight-singing

Two different formats for adjudicated sight-singing were found at the time of this study: (a) sight-singing as part of a regional or state choral festival, and (b) individual sight-singing as part of an honor choir audition. Norris (2004) found that 24 states (48%) in the United States included a formal sight-singing requirement in state-level high school choral ensemble adjudications. Several studies (Demorest, 2001; Snider, 2007; Brendell, 1996) have shown that the existence of sight-singing at festivals tended to have a positive correlation with time teachers spent on sight-singing instruction.

May (1993) surveyed Texas choir directors (*N*=224) eligible to participate in a choral sight-singing contest about their sight-singing instructional practices. A majority (82.3%) of responding directors reported using movable *do.* Responding

directors (79.67%) indicated they spent an average of 10-20 minutes on sight-singing instruction per class session.

Nolker (2006) investigated the individual sight-singing abilities of students (*N*=101) from six high schools participating in a large group festival that included a sight-singing portion in final ratings. Three of the choirs had received "I" ratings for the past three years and the others had not received "I" ratings. He found group success was not an indicator of individual sight-singing ability. However, piano experience was found to have a positive correlation with sight-singing success, corroborating earlier studies.

A study by Yarbrough, Orman, and Neill (2007) examined the usage of time by middle school (*N*=37) and high school (*N*=47) choir directors in the 8 minute preparation time before sight-singing adjudication. Results showed that on average 57.21% of the time was spent with student responses, including performance, verbal, and non-verbal responses. 40.20% of the time was used by teachers giving task presentations. The remaining 2.59% was used giving reinforcement.

Barkey (2004) examined the relationships between all-state audition procedures and teaching methodologies. By surveying choral directors (*N*=150), Barkey determined that solo singing was the most common state choir audition procedure, followed by sight-singing. Respondents (72%) also said that all-state auditions encouraged better teaching. Eight choir directors responded that more consistent sight-singing teaching occurred because of audition procedures. This

study did not examine the relationships between teaching strategies and student scores.

Killian and Henry (2005) compared the difference between high school students (*N*=198) performing a four measure sight-singing example with a 30-second practice before they sang, and those who were not given that opportunity. This study also looked for characteristics found in those students with higher scores. The study found that students with high and medium accuracy scored considerably higher when given 30 seconds to prepare. Students with low accuracy scores did not benefit from preparation time. The traits common in high scoring students were as follows: (a) they established the key, (b) they used hand signs, (c) they sang out loud during practice, (d) they finished the melody early and worked on problem areas, (e) they kept the beat with their bodies, and (f) they kept the beat steady. Traits found among ineffective students included: (a) lack of a steady beat, (b) stopping the melody, (c) taking eyes of the music, and (d) shifting their body position. This study evaluated student performance, not teacher instructional practices.

As this review of literature suggests, comparatively little research has been done to describe the sight-singing instructional practices of teachers involved in a district/all-state audition. Furthermore, no research was found at the time of the present study that examined correlations between sight-singing instructional practices and student scores.

Chapter 3

Method

The purpose of this study was to assess possible relationships among (a) sight-singing scores of secondary choral music students from the Northeast region of a Midwestern state (*N*=397) at a district/all-state audition event and (b) self-reported sight-singing instructional methods employed by their teachers (*N*=44), both across the school year and in period of time prior to the district/all-state audition. This chapter addresses the methodology employed by the researcher to realize this purpose.

Participants

Participants (*N*=44) were high school choir directors from the Northeast district of the Kansas Music Educator's Association who had students participating in the district/all-state audition. The Northeast district of Kansas is a portion of the state that includes the following counties: Atchison, Brown, Doniphan, Douglas, Franklin, Jackson, Jefferson, Johnson, Leavenworth, Miami, Nemaha, Osage, Shawnee, and Wyandotte. According to the US Census Bureau's 2006 estimate, these counties had a total population of 1,182,623 and covered an area of 7,259.08 square miles (US Census Bureau 2006). Of the 51 choir directors participating in the district/all-state audition, 44 participated in the current study, giving this study a response rate of 86.27%.

The Human Subjects Committee Lawrence granted approval to proceed on April 23, 2009. Consent of each teacher was obtained through an information

statement prior to the first survey question. While the researcher knew which teachers participated in this study, the content of completed surveys and the sight-singing scores achieved by each school were masked by a person other than the researcher.

Survey instrument

A survey instrument was designed based on a review of literature and conversations with professionals in the field of choral pedagogy (see Appendix A). The instrument was divided into five sections. The first section contained questions about the demographic data and perceptions of each educator. Included in this section were questions about: (a) the educator's age, (b) the educator's sex (c) the educator's highest academic degree, (d) the educator's high school choral teaching experience, (e) the educator's years of experience at their current position, (f) the educator's school Kansas State High School Activities Association (KSHSAA) classification, (g) the educator's choral enrollment in grades 10-12, and (h) the educator's understanding of the audition process.

The second part contained five Likert-type questions asking respondents to rate a number of statements on a scale of 1-9 (1=strongly agree, 5=neutral, 9=strongly disagree). These statements were designed to gather the educator's perceptions, practices, and attitudes as follows: (a) the educator's belief that sight-singing should be a part of the audition process, and (b) the educator's belief that their students were prepared. In addition, educators responded to statements about

their frequency of sight-singing instruction, on (c) a daily basis, (d) a weekly basis, and (e) the period of time prior to the audition.

The third survey section asked participants to complete two statements designed to determine: (a) the number of minutes sight-singing was taught in the period of time prior to the district/all-state audition, and (b) the number of minutes sight-singing was taught after the audition. The fourth section was designed to determine sight-singing strategies used by the educator. Respondents were asked to indicate the frequency of (a) selected sight-singing strategies (i.e. moveable *do*, fixed *do*, scale degree numbers) by selecting one of the following: always, often, sometimes, or never, and (b) selected rhythm strategies (i.e. counting, ta-ti-ta, neutral syllable) by selecting one of the following: always, often, sometimes, or never. This section was borrowed from Daniels (1985) and Myers (2008) with slight modifications by the researcher. The rhythm strategies were selected by the researcher based upon the findings of Demorest (2004). The last two questions of this section were designed to determine (a) the educator's practice of teaching physical movement during sight-singing, and (b) the educator's practice of using individual sight-singing assessments.

The final section of the survey instrument contained three open ended questions. Teachers were asked to (a) describe their preparation of students for the sight-singing component of the district/all-state audition, (b) list the factors that the educators feel contributed to students who did well on the sight-singing component of the district/all-state audition, and (c) list the factors that the participants thought

contributed to the scores of the student who did not do well on the sight-singing portion of the district/all-state audition.

The survey instrument was piloted by experienced music teachers (*N*=5) familiar with sight-singing audition procedures. No adjustment was necessary. Reliability of this survey instrument was determined by administering the survey on two separate occasions 24 hours apart. Reliability was obtained using the formula agreements divided by agreements plus disagreements. The reliability coefficient for this instrument was .96.

Survey Completion

Participating directors were invited to complete the survey online. The researcher selected the online survey company, Survey Monkey, for cost efficiency and ease of use. An email was sent to all possible participants on April 27, 2009 (see Appendix D). Approximately two weeks later, a follow-up email was sent to possible participants who had not completed the survey (see Appendix E).

Sight-singing Auditions

Choir directors were made aware of the NEKMEA audition procedures through email notifications from the choral chair directing them to the district website. The district website contained a link that describes the sight-singing audition procedures in detail. This information is contained in Appendix B.

Students participating in the district/all-state audition event were given the sight-singing audition procedures at the holding area prior to the audition. Procedures were also made available to students in the hallways outside of the sight-

singing rooms. Upon completion of the passages from literature portion of the audition, students proceeded to their assigned sight-singing rooms.

Upon entering the sight-singing room, students approached a music stand with the covered sight-singing sample (see Appendix B). At this time, a digital CD recording was played. The recording contained the following: (a) a voice saying, "Please remove the cover sheet to reveal the sight-singing example." (b) the tonic triad is played in the appropriate key (1-3-5-3-1-low5-1), (c) a voice saying, "Begin the practice period," (d) 45 seconds of silence, (e) the tonic triad is played again (1-3-5-3-1-low5-1), (f) a voice saying, "Begin," (g) 30 seconds of silence in which the student can complete the sight-singing passage, and (h) a voice saying, "Please stop. Replace the cover sheet over the example and thank-you for auditioning today." Upon completion of the sight-singing portion, students were instructed not to discuss the sample with others and were free to leave the audition area.

Judges for the sight-singing portion of the district/all-state audition were selected by the district choral choir from the population of NEKMEA teachers who volunteered. Judges were required to attend a training session one week prior to the audition. At the training session, judges reviewed the rubric, then completed and discussed several taped audition attempts.

The audition rubric divided the four measure sight-singing sample into eight sections of a half measure each (see Appendix C). The auditionee was awarded three points for every section in which the pitches and rhythms were sung correctly. Auditionees were not penalized nor rewarded for the use of a sight-singing system.

If the auditionee completed the entire sample smoothly and without error on the first attempt, three additional points were given. If the auditionee attempted the exercise, but failed to complete any section correctly, one point was awarded. The auditions were scored out of a possible 27 points (see Appendix B for more information). Students were able to attempt the sample as many times as they wished within the 30-second time allotted and their highest score was counted. In an attempt to maintain anonymity of the auditionee, judges were located behind a blind.

Chapter 4

Results

The purpose of this study was to assess possible relationships among (a) sight-singing scores of secondary choral music students from the Northeast region of a Midwestern state (*N*=397) at a district/all-state audition event and (b) self-reported sight-singing instructional methods employed by their teachers (*N*=44), both across the school year and in period of time prior to the district/all-state audition. A survey instrument was sent to 51 choir directors participating in the Northeast Kansas Music Educator's Association (NEKMEA) district/all-state choir audition. Survey responses were collected from 44 choral teachers yielding a response rate of 86.27%. This chapter addresses (a) teacher demographics, (b) teacher opinion and practices, (c) student sight-singing scores, and (d) relationships between survey results and student sight-singing scores, according to the research questions posed in Chapter 1.

First Research Question: Teacher Demographics

The first research question sought participating teachers' demographics and self-reported teaching practices. Demographic data included: (a) age, (b) sex, (c) post-secondary education, (d) teaching experience, (e) years at current position, (f) school size, (g) choral enrollment, and (h) understanding of the audition process.

Age. Participants ranged in age from 25 to 68 years old, with a mean of 44.02 years (*SD*=11.07). In descending order of frequency, participants' ages fell into the following categories: (a) 41-50 years (*n*=13, 29.55%), (b) 31-40 years

(*n*=11, 25%) (c) 51-60 years (*n*=9, 20.45%), (d) 21-30 years (*n*=7, 15.90%), and 61-70 years (*n*=5, 11.36%).

Sex. The majority of participants in this study were female (*n*=25, 56.82%). Males (*n*=19, 43.18%) made up the balance.

Education. Among participants, most (*n*=25, 56.82%) held master's degrees, while 16 (36.36%) reported the bachelor's degree as the highest attained. Three teachers (6.82%) held doctorates.

Teaching experience. Participants' years of high school teaching experience ranged from two to 38 years, with a mean of 14.68 years (*SD*=10.70). Most teachers had less than 20 years of experience. In descending order of frequency, participants' years of teaching experience fell into the following categories: (a) 2-10 years (*n*=17, 38.64%), (b) 10-19 years (*n*=15, 34.09%), (c) 21-30 years (*n*=7, 15.91%), (d) 31 or more years (*n*=7, 13.64%).

Current position. The majority of participants (*n*=29, 65.91%) reported teaching at his or her current position for fewer than ten years, with a mean of 8.59 years (*SD*=7.72). Eleven teachers (25%) reported between 10 and 19 years at their current position. Of the remaining participants, three (6.82%) reported 20 to 29 years at their current position while two (4.55%) reported teaching at their current position for more than 30 years.

School classification. Kansas high school classification was based upon number of students enrolled in grades 10 through 12 at the beginning the 2008 school year by the Kansas State High School Activities Association (KSHSAA)

(2008). These classifications were divided into six categories: (a) 6A, enrollment between 1074 and 1559, (b) 5A, enrollment between 510 and 993, (c) 4A, enrollment between 195 and 503, (d) 3A, enrollment between 122 and 194, (e) 2A, enrollment between 81-121, and (f) 1A enrollment of fewer than 80 students. Among participating teachers, 16 (36.36%) reported teaching at a 6A school, while 14 (31.82%) reported teaching at a 4A school. Of the remaining teachers, seven (15.91%) taught at a 5A school, five (11.36%) taught at a 3A school, and two (4.55%) taught at a 2A school.

Choral enrollment. Self-reported choral enrollment in grades 10-12 varied from 13 to 265 students with a mean of 96.34 students (*SD*=61.79). The total number of students reported was 4,239 with a median of 79 students. The largest group of teachers (43.18%) reported 50-99 students, followed by teachers (*n*=10, 22.73%) with 100-149 students. Eight teachers (18.18%) had 1-49 students, five teachers (11.36%) had 200+ students, and two teachers (4.54%) had 150-199 students.

Using survey data, a profile of an average participant in this study could be created. This profile would be of a female choir director in the 41-50 year old range. This person would likely have a master's degree and teach at a 6A school. Teaching experience would most likely be fewer than ten years and the teacher would likely have been at her current position for ten or fewer years. Choral enrollment would likely vary between 51-99 students.

Second Research Question: Teacher Practices and Opinions

Procedure understanding. Participants described their understanding of the NEKMEA sight-singing audition procedure by selecting one of the following: (a) I knew there was a sight-singing component, but that is all (*n*=2, 4.55%) (b) I knew there was a sight-singing component and I had knowledge of the length, key, and likely range of the sight-singing samples (*n*=34, 77.27%), and (c) I have attended a NEKMEA sight-singing judges' training session (*n*=8, 18.18%). No teachers reported they were unaware of the sight-singing portion of the audition.

Teacher opinion and frequency. Survey question 10 contained five statements. Participants used a Likert-type scale (1-3 disagree, 4-6 neutral, and 7-9 agree), to respond to each of the following: (a) sight-singing should be included as part of the district/all-state audition procedure, (b) my students were adequately prepared for the district/all-state sight-singing audition this year, (c) I teach sight-singing to my choirs on a daily basis throughout the school year, (d) I teach sight-singing to my choirs at least once each week throughout the school year, and (e) I teach sight-singing to my choirs only in the weeks leading up to the district/all-state audition.

The majority of responding teachers (*n*=30, 68.18%) indicated an agreement with the statement, "Sight-singing should be included as part of the district/all-state audition procedure." Eight teachers (18.18%) indicated disagreement, while six teachers (13.64%) indicated they were neutral. See Figure 1 for complete results. The mean response was 6.89 (*SD*=2.79). The median response was 9.

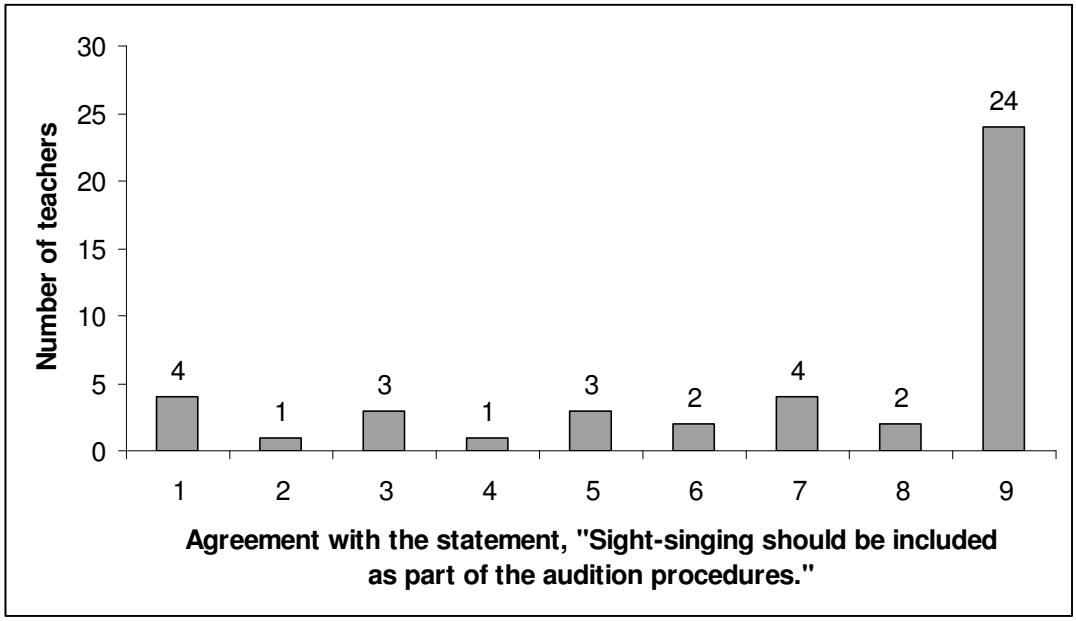

Figure 1. Teacher opinions of sight-singing inclusion. 1-3 disagree, 4-6 neutral, and 7-9 agree.

Just over half of the teachers (*n*=23, 52.27%) indicated agreement with the following statement, "My students were adequately prepared for the district/all-state sight-singing audition this year." Seventeen teachers (38.64%) indicated a neutral stance, while four teachers (9.1%) disagreed. The mean response was 6.12 (*SD*=1.99), and the median response was 6.5.

Nineteen participants (43.18%) indicated agreement with the following statement, "I teach sight-singing to my choirs on a daily basis throughout the school year," while others (*n*=18, 40.91) indicated a neutral agreement. Seven teachers (15.91%) indicated disagreement. The mean response was 5.39 (*SD*=2.36), and the median response was 5.

Most teachers (*n*=30, 68.18%) indicated agreement with the following statement, "I teach sight-singing to my choirs at least once each week throughout the school year." Some teachers (*n*=11, 25%) indicated a neutral stance while one teacher (2.27%) indicated a disagreement. Two participants did not respond. The mean score was 7.21(*SD*=1.83), and the median score was 7.5.

The majority of responding teachers (*n*=30, 68.18%) indicated disagreement with the following statement, "I teach sight-singing to my choirs only in the weeks leading up to the district/all-state audition." Nine teachers (20.45%) indicated an agreement with the statement while five (11.36%) remained neutral. One response was left unanswered. The mean response was 3.05 (*SD*=3.03), and the median response was 1.

Duration of sight-singing instruction. Question 11 of the survey asked teachers to indicate the number of minutes per rehearsal spent on sight-singing instruction in (a) the period of time prior to the district/all-state audition and (b) the remaining school year following the audition. Teachers were also asked to indicate the length of each rehearsal. For analysis, responses were converted into a percentage of rehearsal time.

All responding teachers (*N*=44, 100%) indicated spending rehearsal time on sight-singing instruction prior to the audition. Responses ranged from 5.56% of rehearsal time to 30% of rehearsal time. The mean response was 15.37% of rehearsal time. The median response was 15.5% (*SD*=5.59) of rehearsal time. The largest group of teachers (*n*=16, 36.36%) indicated spending between 10 and 14.99%

of rehearsal time on sight-singing instruction, followed by the 15-19.99% group (*n*=15, 34.09%), the 20-24.99% (*n*=6, 13.64%), the 5-9.99% group (*n*=4, 9.1%), and the 25-30% group (*n*=3, 6.82%).

Two teachers (4.55%) reported spending no time in rehearsal on sight-singing instruction following the district/all-state audition. Remaining responses ranged from 4.17% to 30% of rehearsal time on sight-singing instruction with a mean response of 10.6% (*SD*=5.21) of rehearsal time. The median response was 11.11% of rehearsal time. The largest group of teachers (*n*=24, 54.54%) indicated spending between 10-14.99% of rehearsal time on sight singing instruction following the district/all-state audition, followed by the 5-9.99% group (*n*=10, 22.73%), the 15-19.99% group (*n*=5, 11.36%), the 0-4.99% group (*n*=3, 6.82%), and the 20-30% group (*n*=2, 4.55%).

Rehearsals ranged in length from 42 to 120 minutes with a mean of 74.41 minutes (*SD*=19.88). Twenty-seven participants (61.36%) indicated their rehearsals were 70 minutes or longer, while 17 (38.63%) reported rehearsals shorter than 70 minutes.

Of respondents, most (*n*=24, 54.54%) indicated a higher percentage of time spent on sight-singing instruction prior to the audition. Some teachers (*n*=19, 43.18%) reported teaching the same amount of time throughout the year. One participant (2.27%) indicated spending more time on sight-singing instruction following the audition. On average, teachers spent 4.26% less time on sight-singing instruction in rehearsals following the audition.

Sight-singing systems/methods. Survey question 12 addressed sight-singing systems or methods used by responding teachers. Participants were asked to respond with (a) *always*, (b) *often*, (c) *sometimes*, or (d) *never* as the frequency with which they use the following systems: (a) movable *do*, (b) fixed *do*, (c) scale degree numbers, (d) single syllable, (e) intervals by name, (f) intervals by "tune tag", and (g) another system. Respondents choosing "another system" were asked to specify which system or combination of systems they used. Frequency statements were given numerals for statistical analysis with *always* as a 3, *often* as a 2, *sometimes* as a 1, and *never* as a 0.

The majority of participating teachers (*n*=28, 66.67%) indicated movable *do* as a system they *always* used as indicated by Table 1. Fixed *do* was the least frequent method used among participants. Thirty-one (75.61%) teachers indicated they *never* used fixed *do.*

Table 1

Frequency of Sight-singing Systems/Methods

Sight-singing system	Percentage					
	Always	*Often*	*Sometimes*	*Never*	*M*	*SD*
Movable *do*	66.67	11.90	9.52	1.90	2.33	1.07
Fixed *do*	7.32	7.32	9.76	76.61	.46	.93
Numbers	6.98	13.95	44.19	34.88	.98	.91
Single syllable	2.44	21.95	36.59	39.02	.88	.84
By name	9.30	37.21	34.88	41.86	.91	.97
Tune tag	6.98	41.86	37.21	13.95	1.42	.82

Among participants who indicated using a different system, three indicated using a "count-singing" system with the frequency of *often* (*n*=2) and *sometimes* (*n*=1), two indicated using "solfege" system always, one participant indicated using the note letter names *often*, and one participant indicated a "combination of solfege and tune tag". Seven participants did not respond to this question.

Rhythm reading systems/methods. Question 13 of the survey addressed the use of rhythm reading systems. Teachers were asked to select (a) *always*, (b) *often*, (c) *sometimes*, and (d) *never* as the frequency with which they use the following systems: (a) counting, (b) *ta-ti-ta*, (c) neutral syllable, or (d) another system or combination of systems. Frequency statements were given numerals for statistical analysis with *always* as a 3, *often* as a 2, *sometimes* as a 1, and *never* received a 0.

Most participating teachers indicated using a counting system either *always* (*n*=20, 45.45%), or *often* (*n*=18, 40.91%). *Ta-ti-ta* was the least frequent rhythm reading system with 52.50% indicating *never*. See table 2 for complete results.

Table 2

Frequency of Rhythm Reading Systems/Methods

Rhythm	Percentage					
system	*Always*	*Often*	*Sometimes*	*Never*	*M*	*SD*
Counting	45.45	40.91	11.36	2.27	2.23	.74
Ta-ti-ta	5.00	12.50	30.00	52.50	.46	.93
Neutral syllable	5.00	12.50	44.00	42.50	.80	.85
Single syllable	7.69	15.38	41.03	35.90	.95	.91

The use of a system or combination of systems not listed above was indicated by six participants. Two participants indicated that they substituted words for rhythmic patterns (e.g. “pizza” for a pair of eighth notes or “half-note” for a half-note). Two other participants indicated the use of a variation of ta-ti-ta (e.g. different vowel sounds on each rhythmic value). The remaining participants indicated use of some sort of counting-singing system, by itself or with the incorporation of text.

Assessment procedures. Most participating choir directors indicated the use of some type of assessment to determine student sight-singing skills. The largest category of directors (*n*=21, 47.73%) indicated they assessed student abilities

without a formal assessment tool. Twelve teachers (*n*=12, 27.27%) indicated the use of a formal assessment tool and the results of that assessment were included in the students' final grade. Seven teachers (15.91%) reported the use of a formal assessment tool without the results counting in the final grade. The remaining four participants (9.01%) indicated they did not assess their students' sight-singing abilities. For statistical analysis, categories were ranked with 1 representing the absence of assessment and 4 representing the use of a graded assessment. The mean score was 2.61 (*SD*=.99). The median score was 2.

Open Ended Responses

Survey items 15, 16, 17, and 18 solicited open ended responses from participants. These responses were organized and tabulated into categories that were both exhaustive and mutually exclusive.

Movement. Survey question 15 addressed teachers' instruction in the use of movement while sight-singing. See Appendix I for a complete list of responses. Seven categories were present and are presented in order of frequency. The use of hand-signs was the most common and was found in 27 responses (61.36%). The second most common was an indication of the use of a steady beat (*n*=19, 43.18%). Several participants (*n*=12, 27.27%) reported teaching students to use some type of conducting pattern. Among remaining positive responses were clapping (*n*=3, 6.82%), yes with no specificity (*n*=3, 6.82%), and marching (*n*=1, 2.27%). Nine (20.45%) negative responses were found including seven by omission.

Preparation. Survey question 16 asked participants to report his or her preparation of students prior to the audition. See Appendix F for a complete list of responses. One response was left unanswered. The following categories were constructed: (a) resources, (b) systems/procedures, and (c) settings.

Teachers reported using several different sources for practice sight-singing examples. Most (*n*=34, 79.07%) indicated the use of some sort of resource. The three most common resources were (a) examples provided by NEKMEA (*n*=14, 32.56%), (b) published methods (*n*=13, 30.23%), and (c) examples of similar key and length to the provided examples, (*n*=12, 27.91%). See Table 3 for a complete list of resources reported by participants.

Table 3

Reported Resources

Resource	Frequency	Percentage
Any resource	34	79.07
NEKMEA examples	14	32.56
Published methods	13	30.23
Non-specified	3	6.98
90 Days to Sight-singing Success	2	4.65
Sing at First Sight	2	4.65
Jenson's Sight-singing Method	2	4.65
Hemmenway Sight-singing	1	2.33
Church Hymnal	1	2.33

Resource	Frequency	Percentage
Southern Music Sight Reading	1	2.33
Melodica	1	2.33
Masterworks Plus	1	2.33
Oxford Folk Song Series	1	2.33
Examples similar to NEKMEA	12	27.91
From literature	4	9.30
Teacher composed	4	9.30
Examples with rhythm only	1	2.33
Examples longer than NEKMEA	1	2.33
Examples from other state	1	2.33

n=43

Teachers reported using different systems/methods or procedures to prepare students for the audition. The most common were: (a) examining audition procedures (*n*=5, 11.63%), (b) solfege (*n*=5, 11.63%), and (c) timed performance (*n*=4, 9.3%). See Table 4 for a complete list of responses.

Table 4

Reported Systems/Methods or Procedures

System/Method	Frequency	Percentage
Examine audition procedures	5	11.63
Solfege	5	11.63

System/Method	Frequency	Percentage
Timed performance	4	9.30
Timed practice	3	6.98
Interval practice	3	6.98
Establish key vocally	3	6.98
Numbers	2	4.65
Clapping	2	4.65
Mock audition	2	4.65
Counting	1	2.33
Rhythm chant	1	2.33
Hand-signs	1	2.33
Error detection practice	1	2.33
A cappella singing	1	2.33
Neutral syllable singing	1	2.33
Text in rhythm	1	2.33
Identify key	1	2.33

n=43

Several participating teachers listed settings used in preparation for the sight-singing audition. Three basic categories were compiled to describe these settings: (a) location, (b) participation, and (c) time of year. The most common location reported was a combination of in and outside of class (*n*=9, 20.93%). The most

frequent participation setting reporting was a combination of group and solo practice (*n*=11, 25.58%). The most common time of year was year-round (*n*=10, 23.26%). See Table 5 for a complete list.

Table 5

Reported Settings

Setting	Frequency	Percentage
Location		
In class only	6	13.95
Outside of class only	1	2.33
Both in class and outside class	9	20.93
Participation		
Solo practice only	1	2.33
Group practice only	2	4.65
Combination of solo and group	11	25.58
Time of year		
Practice on a regular basis	10	23.25
Practice prior to audition only	1	2.33
Regular practice modified for audition	6	13.95

n=43

Factors contributing to student success. Question 17 examined factors teachers thought contributed to student success during the sight-singing audition.

Two responses were left blank. The following categories were constructed: (a) student background, (b) student preparation, and (c) settings.

Several teachers (*n*=24, 57.12%) cited student background as a reason for success while sight-singing. The most common background factors listed were (a) instrumental experience (*n*=14, 33.33%), (b) natural ability (*n*=6, 14.29%), and (c) a developed tonal concept (*n*=4, 9.52%). See Table 6 for a complete list of responses in this category.

Table 6

Student Background Factors Leading to Success

Background factor	Frequency	Percentage
Any factor	24	57.12
Instrumental experience	14	33.33
Natural ability	6	14.29
Developed tonal concept	4	9.52
Private voice lessons	3	7.14
Self-confidence	2	4.76
Prior sight-singing education	2	4.76
Years of practice	1	2.38
Intelligence	1	2.38
Luck	1	2.38
Ability to handle pressure	1	2.38
Rhythmic skill	1	2.38

Background factor	Frequency	Percentage
Understood the benefits of sight-singing	1	2.38

n=42

Many teachers (*n*=21, 50%) listed student preparation as a cause of success during the sight-singing audition. The most common factors were reported were (a) student practice (*n*=16 38.1%) and (b) student motivation (*n*=7, 16.67%). See Table 7 for a complete list of responses.

Table 7

Student Preparation Factors Leading to Success

Preparation factor	Frequency	Percentage
Any factor	21	50.00
Practice	16	38.10
Motivation	7	16.67
Dedication to using a system	4	9.52
Solfege	4	9.52
Interval Practice	2	4.76
Practice in the correct key	1	2.38
Practice in the correct clef	1	2.38
Count-singing	1	2.38
Use of hand-signs	1	2.38
Use of a mock audition	1	2.38

Preparation factor	Frequency	Percentage
Ability to find difficult spots	1	2.38
Understood the audition process	1	2.38

n=42

Some choir directors (*n*=12, 28.57%) listed the setting of student practice as a possible factor contributing to student success. Several teachers (*n*=8, 19.04%) listed student preparation in class contributing to success and five (11.90%) reported student preparation outside of class contributing to success. See Table 8 for a complete list of setting factors.

Table 8

Student Setting Factors Leading to Success

Setting factor	Frequency	Percentage
Any factor	12	28.57
In class	8	19.04
Outside of class	5	11.90
Daily	5	11.90
One-on-one with teacher	2	4.76
For classmates	1	2.38
Consistently	1	2.38

n=42

Factors hindering student success. Question 18 of the survey asked choir directors to describe the factors they felt hindered student success. Three responses were unanswered and two more participants failed to answer the question posed. See Appendix H for a complete list of responses. Four categories of responses were created: (a) student background, (b) student preparation, (c) teacher factors, and (d) audition factors.

Participating teachers (*n*=25, 60.98%) cited student background factors more often then any other set of factors as a hindrance to student success. The most common responses were (a) lack of confidence (*n*=9, 21.95%), (b) lack of sight-singing experience (*n*=8, 19.51%), and (c) lack of interest in sight-singing (*n*=6, 14.63%). See Table 9 for a compete list of factors in this category.

Table 9

Student Background Factors Hindering Success

Background factor	Frequency	Percentage
Any factor	24	60.98
Lack of confidence	9	21.95
Lack of experience	8	19.51
Lack of interest	6	14.63
"Don't get it"	4	9.76
Never auditioned before	3	7.31
No instrumental experience	2	4.88
Defeatist attitude	2	4.88

Background factor	Frequency	Percentage
Poor rhythmic skill	2	4.88
Overconfidence	2	4.88
Poor interval skill	2	4.88
Poor pitch	1	2.44
Never learned to read	1	2.44
Lack of musical knowledge	1	2.44
Struggles with reading words	1	2.44
Lack of discipline	1	2.44
Poor ear	1	2.44

n=41

Sixteen choir directors (39.02%) listed several audition factors that contributed to students performing poorly. Anxiety or nervousness (*n*=13, 31.71%) was the most common response in this category. All other factors were indicated by one participant. See Table 10.

Table 10

Audition Factors Hindering Success

Audition factor	Frequency	Percentage
Any factor	16	39.02
Anxiety or nervousness	13	31.71
Time limit	1	2.44

Audition factor	Frequency	Percentage
Got stuck on an interval	1	2.44
Tempo was too fast	1	2.44
Lost track of solfege	1	2.44
Missed an interval	1	2.44
Failed to locate difficult passages	1	2.44
Doubt preparation	1	2.44
Lack of concentration	1	2.44
Sang with a neutral syllable	1	2.44
Poor use of practice time	1	2.44

n=41

Some participating teachers (*n*=14, 34.15%) also described student preparation factors as a reason students did not do well on the sight-singing audition. The most common among these factors were (a) lack of learning a system for sight-singing (*n*=6, 14.64%), and (b) lack of practice (*n*=4, 9.76%). See Table 11 for a compete list of responses in this category.

Table 11

Student Background Factors Hindering Success

Background factor	Frequency	Percentage
Any factor	14	34.15
Lack of a system for sight-singing	6	14.63

Background factor	Frequency	Percentage
Lack of practice	4	9.76
Lack of individual preparation	3	7.31
Lack of mastery in practice	1	2.44
Learning a system too complicated	1	2.44
Lack of mock audition practice	1	2.44

n=41

Some teachers (*n*=6, 14.63%) listed teaching factors that contributed to lower student scores. Responses in this category were varied and included a lack of year-round sight-singing instruction and no plan for assessment in place. See Table 12.

Table 12

Teacher Factors Hindering Success

Teacher factor	Frequency	Percentage
Any factor	6	14.63
Need to teach sight-singing year-round	2	4.88
Busy performance schedule	1	2.44
No plan for student assessment	1	2.44
Lack of focus on sight-singing instruction	1	2.44
Best students did not audition	1	2.44
Poor preparation	1	2.44

n=41

Third Research Question: Student Scores

The third research question sought to find descriptive characteristics of student sight-singing scores from the November 8, 2008 NEKMEA district/all-state audition. Audition procedures are found in Chapter 3. Student scores were disaggregated by the following: (a) frequency of score, (b) school, and (c) voice part.

Frequency of sight-singing scores. Among auditionees scores ranged between 1-27 points, with a modal score of 6 (n=93, 20.09%). Fourteen students received the highest possible score (3.02%) while 23 students received the lowest possible score (4.97%). See Figure 2 for student numbers disaggregated by score.

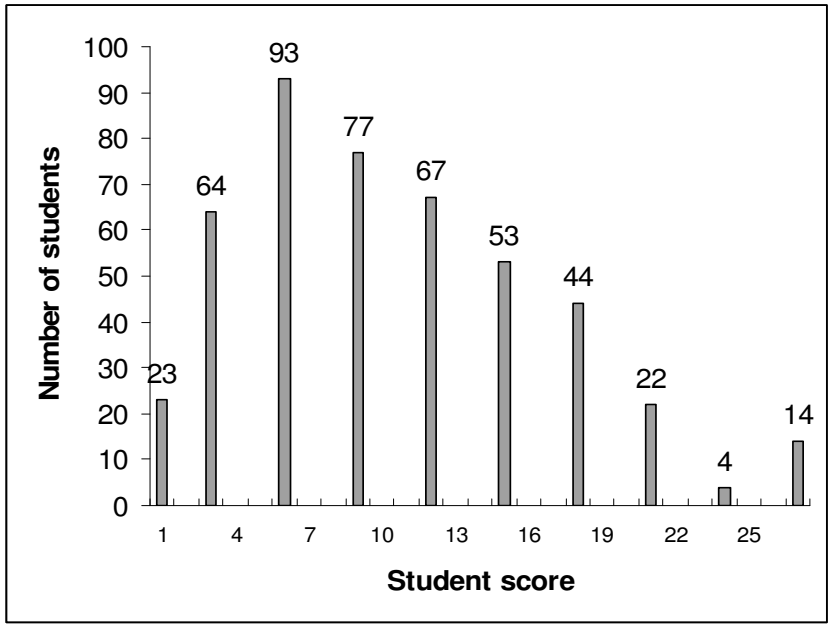

Figure 2. Frequency of student scores.

Scores by school. The following data were reported for each school: (a) mean score, (b) median score, (c) standard deviation, (d) number of auditionees, and (e) mean percentile rank. Table 13 contains a complete list of scores.

The mean score among students (*N*=397) who had teachers participating in the present study was 10.43. The highest obtained mean score was achieved by school 13 with a mean of 19.8. The lowest mean score among schools that auditioned with more than one student was school 31 with a mean score of 4.

The median score among all students (*N=397*) was 9. The highest median score was achieved by school 13 with a median of 21. The lowest median score among schools that auditioned more than one student was school 3 with a median score of 3.

The standard deviation among all students' (*N*=397) was 6.08. The standard deviation of scores among schools participating with more than one auditionee varied. The greatest standard deviation (9.29) occurred with the scores of school 3. The smallest standard deviation (1.73) occurred among two schools, 4 and 31.

The number of students auditioning from each school varied between 1 and 20 with a mean of 9.09 students. Six schools brought the maximum number of students (*n*=20) to the audition. Five schools brought one student.

Table 13

Disaggregated Sight-singing Scores by School

School code	Mean	Median	Standard Deviation	*n*	Percentile
1	12	12	-	1	80
2	10.50	10.5	2.12	2	69
3	7.33	3	9.29	3	32
4	7	6	1.73	3	26

School code	Mean	Median	Standard Deviation	*n*	Percentile
6	12.56	10.5	6.50	16	85
7	9.50	9	5.44	20	58
8	7.14	6	4.38	14	28
9	9	9	-	1	51
10	5	6	3.82	7	13
13	19.80	21	6.49	20	99
14	18	18	-	1	97
15	14.85	13.5	5.19	20	91
16	11.83	10.5	6.63	18	77
17	10.50	10.5	6.36	2	69
18	9	9	5.48	4	51
19	7.20	9	2.68	5	30
20	12	9	7.94	3	80
21	8.63	7.5	5.18	8	42
22	9	7.5	5.37	6	51
23	6.06	3	5.14	16	15
25	10.5	10.5	6.63	2	69
26	9	9	-	1	51
27	6.25	7.5	3.77	4	19
28	10.95	9	4.99	20	74
29	6.89	6	4.74	19	25

School code	Mean	Median	Standard Deviation	*n*	Percentile
30	15	15	7.35	4	93
31	4	4.5	1.73	3	9
32	6.67	6	4.93	6	22
33	11.21	12	5.99	19	75
35	10.07	9	5.47	14	64
36	3	3	-	1	5
37	14.67	15	6.42	18	69
39	4.25	3	2.55	8	11
40	9	9	4.24	2	51
41	6.67	6	4.44	9	22
42	10.50	9	3.21	8	69
44	9	6	5.20	3	51
45	8.75	7.5	5.20	8	44
46	7.8	9	3.42	5	34
47	6.13	6	4.36	8	17
48	12.90	12	5.16	20	87
49	12.31	12	6.99	19	83
50	9.83	9	5.62	18	62
51	8.38	6	8.16	8	38

Note. Dashes indicate standard deviation could not be calculated.

Scores by voice part. Figure 3 contains the 2008 NEKMEA audition exercises. Sight-singing scores disaggregated by voice part appear in Table 14. The highest scoring section was the bass 1 section with a mean score of 11.69. Bass 1 also had the highest median score (12). The soprano 1 section had the highest number of auditionees and bass 2 had the lowest.

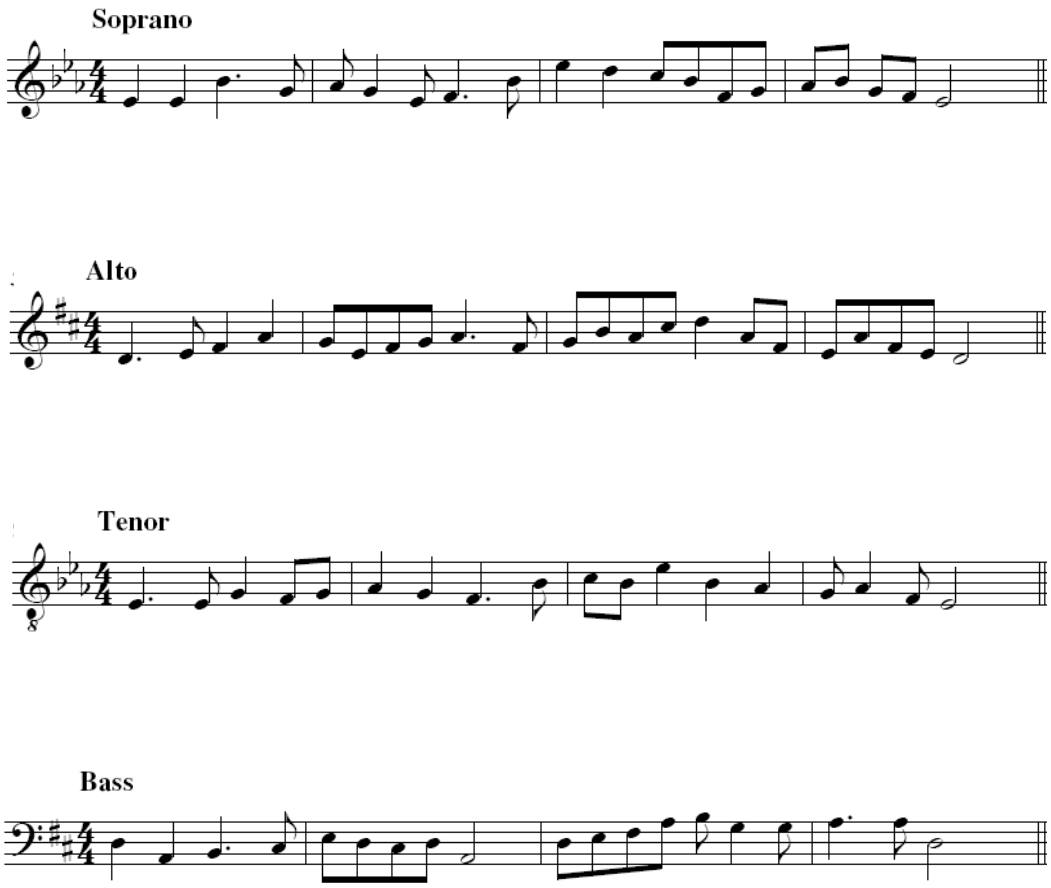

Figure 3. 2008 sight-singing exercises.

Table 14

Disaggregated Sight-singing Scores by Voice Part

Voice	*M*	*Mdn*	*SD*	*n*
Soprano 1	10.19	9	5.79	72
Soprano 2	9.21	6	6.14	66
Alto 1	10.40	9	5.91	67
Alto 2	9.47	9	6.06	53
Tenor 1	10.16	9	6.89	58
Tenor 2	11.36	10.5	7.19	50
Bass 1	11.69	12	6.49	55
Bass 2	11.07	10.5	6.29	42

n=463

Fourth Research Question: Relationships among Survey Responses and Scores

Research question four sought to find relationships among: (a) teacher self-reported demographics, (b) teacher self-reported instructional practice, and (c) student sight-singing scores. To address this question, a Pearson Correlation Coefficient was calculated.

Relationships among teacher demographics and student scores. Using a Pearson Correlation, each response was compared to student scores. Teacher responses multiplied by the number of auditionees participating and matched with corresponding student scores. Relationships, both positive and negative, were

categorized as (a) strong (.75 to 1), (b) moderate (.5 to .74), (c) weak (.2 to.49), and (d) no correlation (0 to .19). Relationships were also tested for statistical significance (α=.0001)

A comparison of teacher demographic data to scores revealed several weak positive relationships. A statistically significant relationship (r=.33, p=.0001) was found to exist among student scores and teacher understanding of the audition process, indicating teacher knowledge was a statistically significant but weak predictor of student performance. Another statistically significant relationship (r=.28, p=.0001) was found between the number of students auditioning per school and student scores. The greater number of students from each school participating, the higher student scores were likely to be.

School classification (r=.25, p=.0001) and choral enrollment (r=.25, p=.0001) were also found to have statistically significant but weak relationships with student scores. The larger the school, the more likely students were to score highly. In addition, the greater the reported enrollment was for each school, the higher students tended to score. The weakest statistically significant relationship (r=.22, p=.0001) was found between teachers' highest academic degree and student scores, suggesting the higher the teachers' level of education, the more likely students were to score well. See Table 15 for a complete list of teacher demographics and student score relationships.

Table 15

Relationships among Teacher Demographics and Student Scores

Demographic factor	*r*	*p*	*n*
Understanding of the audition process	.33	.0001	397
Choral enrollment	.25	.0001	397
School classification	.25	.0001	397
Highest academic degree	.22	.0001	397
Sex	.09	.08	397
Years at current job	-.12	.02	397
Age	-.16	.002	397
Years of teaching experience	-.17	.001	397

Relationships among teacher opinion, frequency of instruction, and student scores. Survey Question 10 sought: (a) teachers' opinions of the efficacy of the sight-singing audition, (b) teachers' opinions of the preparedness of their students for the audition, and (c) teachers' frequency of sight-singing instruction. A weak positive correlation was found among sight-singing scores and three factors. The strongest statistically significant relationship (r=.34, p= .0001) was found between teacher belief their students were prepared for the audition and student scores, indicating teachers who felt their students were adequately prepared were more likely to have higher scoring students. Teachers who reported teaching sight-singing on a daily basis (r=.29, p= .0001) and teachers who reported teaching sight-singing

at least once a week (r=.25, p= .0001) were also found to have statistically significant but weak relationships with student scores.

A statistically significant but weak negative correlation (r= -.22, p= .0001) was found among teachers who reported sight-singing instruction only in the period leading up to the audition. Teaching sight-singing prior to the audition only was predictive of lower sight-singing scores. See Table 16 for teacher opinion, frequency of instruction, and student score relationships.

Table 16

Relationships among Teacher Opinion and Student Scores

Teacher factor	*r*	*p*	*n*
Preparedness of auditioning students	.34	.0001	397
Teaching sight-singing on a daily basis	.29	.0001	397
Teaching sight-singing once a week	.25	.0001	371
Efficacy of the sight-singing audition	.16	.002	397
Teaching sight-singing prior only	- .22	.0001	389

Figures 4, 5, and 6 present scatter plot comparisons of different teaching frequencies. The *x* axes represent teacher agreement (1-3 disagree, 4-6 neutral, and 7-9 agree) with statements sight-singing instruction frequency. The *y* axes represent student scores. Each dot is labeled with the number of students achieving each score.

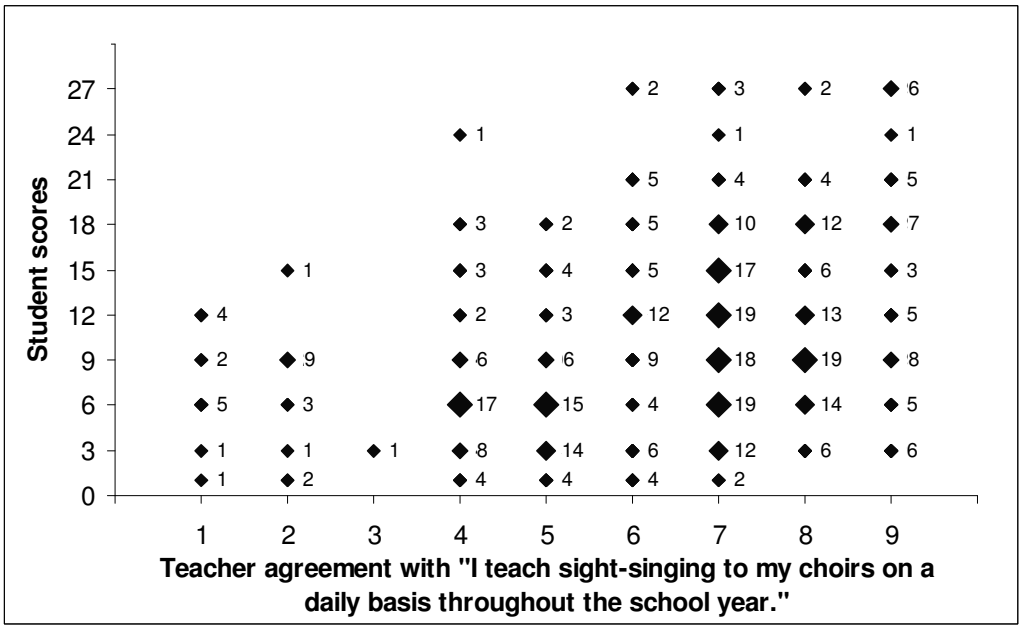

Figure 4. Teaching sight-singing daily. 1-3 disagree, 4-6 neutral, and 7-9 agree.

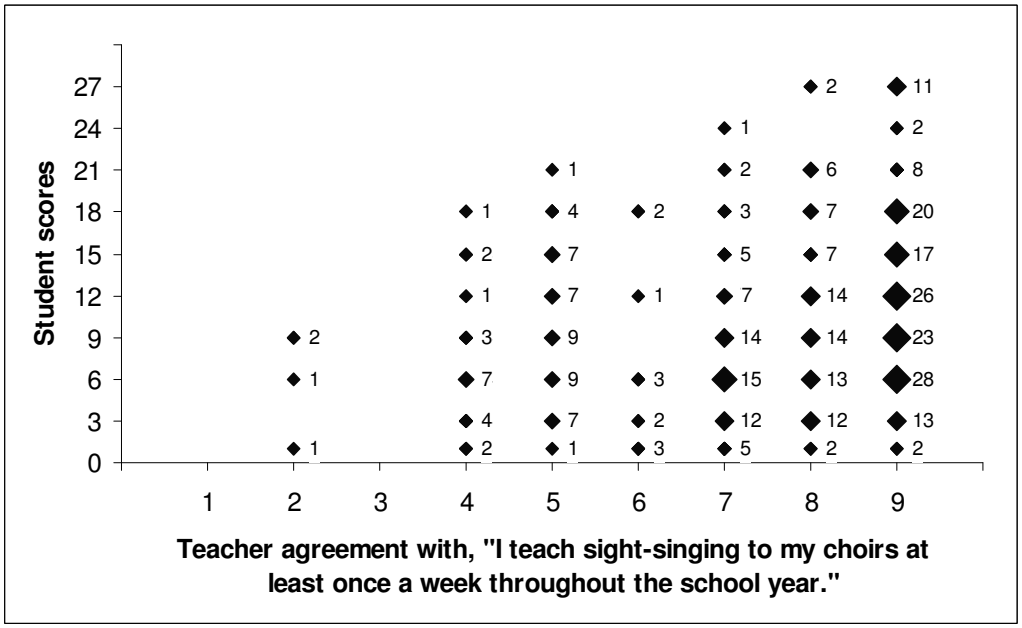

Figure 5. Teaching sight-singing at least once weekly. 1-3 disagree, 4-6 neutral, and 7-9 agree.

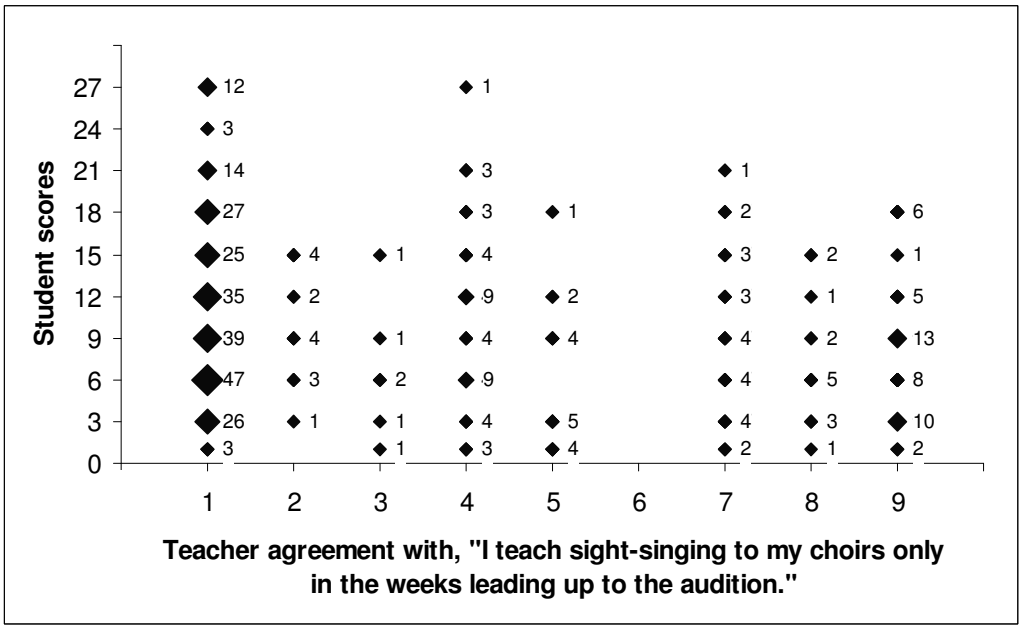

Figure 6. Teaching sight-singing prior to audition only. 1-3 disagree, 4-6 neutral, and 7-9 agree.

Relationships among duration of sight-singing instruction and student scores. Question 11 of the survey sought to find the duration of sight-singing instruction prior to, and following the audition. No statistically significant relationships were found among the percentages of time spend on sight-singing instruction both before and following the audition and student scores. Higher percentages of rehearsal time were not predictive of student success. Rehearsal length, however, was found to have a statistically significant but weak relationship (r= -.21, p= .0001) with student scores. This finding suggests shorter rehearsals were mildly predictive of sight-singing success (see Table 17).

Table 17

Relationships among Duration of Instruction and Student Scores

Teacher factor	*r*	*p*	*n*
Rehearsal time prior to audition	.01	.855	381
Rehearsal time following audition	.02	.692	397
Rehearsal length	- .21	.0001	397

Relationships among instructional methods and student scores. Questions 12, 13, and 14 of the survey examined teacher instructional practices regarding (a) sight-singing systems, (b) rhythm reading systems, and (c) use of individual assessment. One statistically significant but weak relationship (r= -.25, p= .0001) occurred between student scores and a Ta-ti-ta method of rhythm instruction. See Table 18 for a complete list of instructional methods.

Table 18

Relationships among Instructional Methods and Student Scores

Teacher method	*r*	*p*	*n*
Sight-singing system			
Movable *do*	- .01	.924	365
Fixed *do*	.13	.011	365
Scale degree numbers	- .08	.139	389
Single syllable	- .06	.298	361
Intervals by name	.13	.010	389

Teacher method	*r*	*p*	*n*
Sight-singing system			
Intervals by tune tag	.03	.546	377
Rhythm-reading system			
Counting	.06	.262	397
Ta-ti-ta	- .25	.0001	349
Neutral syllable	- .10	.079	341
Single syllable	- .03	.587	321
Assessment			
Assessment procedures	.14	.003	397

Relationships among teacher responses. Using a Pearson Correlation, each survey response was compared to the remaining responses. Relationships, both positive and negative, were categorized as (a) strong (.75 to 1), (b) moderate (.5 to .74), (c) weak (.2 to.49), and (d) no correlation (0 to .19). See Table 19 for a complete list of significant (α=.0001) correlations among teacher responses.

A correlation matrix of all teacher responses revealed two significant strong relationships. The strongest statistically significant correlation (r=.82, p=.0001) was found between teacher age and years of teaching experience. The other statistically significant strong relationship (r=.75, p=.0001) was found between school classification and number of students auditioning.

Table 19

Significant Moderate and Strong Relationships among Teacher Responses

Relationship	*r*	*n*
Age and teaching experience	.82	44
School classification and number of auditionees	.75	44
Choral enrollment and number of auditionees	.73	44
School classification and choral enrollment	.66	44
Age and years at current position	.65	44
Daily sight-singing instruction and student preparedness	.65	44
Teaching experience and years at current position	.64	44
Choral enrollment and use of single syllable (rhythm)	.63	39
Use of a neutral syllable and single syllable (rhythm)	.56	39
Daily sight-singing instruction and use of assessment	.53	44
Intervals by name and intervals by tune tag	.52	42
Daily sight-singing and weekly sight-singing instruction	.52	42
Daily sight-singing instruction and number of auditionees	.51	42
Student preparedness and rehearsal length	-.50	44
Movable *do* and fixed *do*	-.53	40

Note: All relationships are statistically significant (α=.0001).

Chapter 5

Discussion

The primary finding of this study is that some weak relationships appear to exist between student sight-singing scores at a district/all-state audition event and teacher demographics, teacher opinions and some self reported instructional practices. Results are limited to participants in this study and the particular methodology employed in this investigation. Nonetheless, findings reveal several matters worthy of reflection and further research.

Teacher Practices

Understanding of the audition process. A majority of teachers (*n*=42, 95.45%) in this study report a clear understanding of the audition process. These results may suggest the NEKMEA leadership has done an adequate job informing choir directors, and most choir directors have taken the time to learn the procedures. Future research might explore whether students have a clear understanding of the sight-singing audition process.

Teacher opinion. Most teachers (*n*=30, 68.18%) participating in this study indicate they agree with the inclusion of a sight-singing component of the in the district/all-state choir audition. Future research could examine reasons teachers support this audition format.

Student scores vary widely among teachers who think their students were prepared, with mean scores ranging from 7 to 19.8. This range may suggest that

responding teachers have varying ideas of student preparedness or may feel their instructional efforts have been adequate.

Frequency and duration of instruction. Self-reported data about duration of sight-singing instruction suggest all choir directors (*N*=44, 100%) teach sight-singing to their students in rehearsals prior to the district/all-state audition. Moreover, all but two choir directors (*n*=42, 95.45%) report including sight-singing instruction in rehearsals following the district/all-state audition. This percentage of choir directors is higher than those appearing in other studies conducted in the Midwest: Snider (2007) reports 84% while von Kampen (2003) reports 48%.

Self-reported mean percentage (15.38%) of rehearsal time dedicated to sight-singing is less than found in other studies. Brendell (1996) reports 22.23% while Floyd and Bradley (2006) report 18%. Self-reported data from this study reveal an average of 11.03 minutes per rehearsal prior to the audition and 7.68 minutes per rehearsal following the audition. These data are similar to Demorest (2004) at 9.5 minutes per rehearsal and May (1993) with most teachers reporting between 10 and 20 minutes per rehearsal on sight-singing instruction. Demorest (2001), Snider (2007), and Brendell (1996) suggest a link exists between the existence of adjudicated sight-singing at choir festivals and time spent on sight-singing instruction. More research is needed to determine if the existence of sight-singing auditions may have a similar link.

Sight-singing and rhythm systems/methods. Consistent with extant literature (May, 1993; Demorest, 2004; Floyd & Bradley, 2006, Kuehne, 2007; McClung,

2001; Snider, 2007), most participants (84.14%) report movable *do* as the most common method employed while sight-singing. Results of this study are also congruent with Demorest's (2004) finding 47% of responding directors in his investigation using a counting system to teach rhythm. Both studies find counting to be the most common rhythm reading system.

Use of individual assessment. Demorest (2004) reports 83% of his respondents assess sight-singing abilities of their students. This percentage compares favorably with 90.10% of participants in the present study indicating the use of assessments ranging from informal to formal and graded.

Use of movement while sight-singing. Results of this study suggest several (61.36%) participating high school directors in Northeast Kansas teach the use of hand-signs. Caution should be used when viewing these data due to possible survey instrument bias. The survey item suggested three possibilities, "e.g. hand-signs, tap a steady beat, conducting pattern." Several responses included the three suggestions listed in order, possibly indicating these suggestions influenced responses. More research is needed to determine the efficacy of tapping a steady beat and the use of conducting patterns with students of varying sight-singing ability levels.

Student preparation. Participating teachers (n=12, 27.91%) indicate the use of sight-singing examples similar to those found in the district/all-state audition. Some teachers (n=5, 11.36%) indicate covering the audition procedures with students. More research could determine to what extent students are made aware of the audition process. Some teachers (n=2) indicate the use of a mock audition.

Future research may help determine the efficacy of this practice among students auditioning for an honor ensemble.

Factors contributing to student success. Consistent with other research (Colwell, 1963; Tucker, 1969; Killian & Henry, 2005), some respondents suggest instrumental music background is a factor promoting students' sight-singing ability. Several teachers (*n*=6) also suggest the presence of "natural ability" as a factor leading to sight-singing success. More research is needed to determine what factors contribute to a student who may appear to have natural ability. Teachers (*n*=16, 38.10%) also attribute student practice to sight-singing success more frequently than other factors. More research might determine if these student practice sessions are effective and how students utilize individual practice time.

Factors hindering student success. The most common factor hindering student sight-singing success listed by respondents (*n*=13, 31.71%) is nervousness. Some teachers suggest a mock audition or performing alone for the teacher could help ameliorate these obstacles. Six teacher responses (14.63%) include mention of teaching factors that hinder student sight-singing success, suggesting the possibility many teachers feel student sight-singing success is out of their control, or they adequately prepare their students for the audition. More research is needed to determine the extent to which teachers think they can actually improve student sight-singing scores.

Student Scores

Scores received by students tend to be low, with the modal score among participants being 6. A median score of 9 reveals over half of the students (n=258) sing only a measure and a half correctly according to their judges. Several students (n=24) fail to sing a half-measure correct. More research could be conducted to determine which areas of the sight-singing exercises are most difficult.

Relationships among Survey Responses and Scores

All obtained relationships among teacher survey results and student sight-singing scores are either weak or no correlation is found. The diversity among student scores, even from the same school, may contribute to the weakness of these relationships. It may be worth noting that while some teachers' students score higher than others, no teacher's students all receive perfect scores. This factor suggests no teachers in the present study have found a perfect method for teaching sight-singing to all students.

Teacher demographics and student scores. It may be unremarkable that larger schools are found more likely to have higher scoring students than smaller schools in this study. This correlation is possibly due to more competition among students or a teacher with a larger pool of students from which to draw the auditionees. More research is needed to determine if positive attitudes are present about sight-singing instruction to corroborate von Kampen's (2003) research, who finds school size to be predictive of positive attitudes toward sight-singing instruction.

The weak positive correlation (r=.224) between teachers' academic degree and student scores suggests the possibility that students may benefit from having a more educated teacher. Furthermore, continuing education may offer choir directors additional strategies and skills for teaching sight-singing. This relationship may also exist due to the higher number teachers with master's and doctoral degrees teaching at larger schools.

The lack of significant relationships among sex, age, teaching experience, years of teaching at current job and student scores suggests, for this population, these factors are not predictive of sight-singing success. However, longitudinal research is needed to determine how student scores are affected by teacher experience.

Teacher opinion and student scores. The positive relationship (r=.343) between teachers who report high student preparedness and student scores is likely unremarkable. It is interesting to note, however, the diversity in scores among teachers who thought their students were prepared. Mean sight-singing scores ranged from 7 to 19.8 in the *agree* group, possibly suggesting teachers have different levels of expectation for student success in sight-singing. Results may also suggest that these teachers are unwilling to admit a lack of preparedness or have little way to measure student preparedness. More research is needed to determine what factors contributed to teachers' sense of preparedness.

The relationships among the three levels of sight-singing instruction frequency (daily, weekly, and only prior to the audition) and student scores might offer the most interesting finding of this study. Little difference is found between

the results of those who reported teaching daily (r=.293), and those who report teaching weekly(r=.246). These similarities may be due to survey design, as teachers who teach daily also teach weekly. Possibly the most striking differences in relationships is between daily sight-singing instruction (r=.293) and sight-singing instruction only prior to the audition (r= -.217). This difference may suggest, for these participants, sight-singing is a skill that is better taught at regular intervals throughout the year rather than just in the weeks prior to the audition.

Participants' percentage of rehearsal time denoted to sight-singing instruction, both before and following the audition, has no significant relationship to student scores. This finding may seem to be counterintuitive, as one might suppose, more time on sight-singing instruction would lead to better prepared students. It appears, however, for these participants, duration of instruction is less associated with sight-singing success than frequency of instruction.

The existence of a negative relationship between rehearsal length and student scores is interesting to note. More research is needed to determine if this finding may possibly be a result of block scheduling or some other factor.

Relationships among teaching methods and student scores. The absence in this study of a strong positive relationship among student scores and some single method of teaching sight-singing is consistent other research (Martin, 1991; Bluestine, 2007; Cassidy, 1993; McClung, 2008; Henry & Demorest 1994). The only significant relationship found among rhythm instructional methods and student scores is a weak negative correlation (r= -.249) with the use of a *ta-ti-ta*. More

research is needed to determine whether or not this relationship exists in other populations, teachers, and students.

Individual assessment. Demorest (1998) finds significant differences in the sight-singing scores of students who are given individual testing. Results of this study (r=.140) are not able to corroborate these findings. More research is needed to determine what methods of assessment teachers use.

Relationships among teacher responses. A negative relationship (r= -.505) is found among teachers' reported student preparedness and rehearsal length. More research is needed to determine the cause of this relationship.

Conclusions

These results cannot be generalized to other situations. This study relies upon teachers' self-reported data rather than direct observation. The participants (N=44) represent a small sample size and teach in a localized region.

The findings of this study do not support any definitive conclusions about sight-singing instruction. No sight-singing method is found to be predictive of sight-singing success. Findings may suggest, however, that daily sight-singing instruction is found among schools with higher scoring students. However, the presence of daily sight-singing instruction does not guarantee or predict high scores. More research is needed to determine galvanizing factors predictive of student sight-singing success.

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Appendix A

Survey Instrument

1.

Please read the following:

The Department of Music Education and Music Therapy at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.
We are conducting this study to better understand sight-singing instructional practices and how they relate to sight-singing scores. This will entail your completion of a questionnaire. The questionnaire is expected to take approximately 15 minutes to complete.
The content of the questionnaires should cause no more discomfort than you would experience in your everyday life. Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of successful sight-singing instructional practices. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.
Completion of the survey indicates your willingness to participate in this project and that you are at least age eighteen. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429 or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email dhann@ku.edu.

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Your identity and responses to this questionnaire will remain unknown to the researcher. Please be aware that the choral chair of the NEKMEA will personally mask all names and schools associated with each response.

Thank you for taking the time to complete this short survey. Please take your time and answer each question candidly. Your participation in this project can contribute to knowledge in our field and possibly offer teachers useful solutions to pedagogical problems.

When you are ready to begin, click on the button labeled NEXT.

2. School

1. At which high school do you currently teach?
For coding purposes only. Please do not abbreviate.

3. Demographics

2. What is your age?

3. Check one:

- ◯ Male
- ◯ Female

4. What is your highest academic degree? (check one)

- ◯ Bachelor's
- ◯ Master's
- ◯ Doctoral

5. How many years, including this year, have you been teaching high school choir?

6. How many years, including this year, have you been at your current teaching position?

7. What KSHSAA classification does your school currently have? (check one)

- ◯ 6A
- ◯ 5A
- ◯ 4A
- ◯ 3A
- ◯ 2A
- ◯ 1A

8. How many students are currently enrolled in your choir program? (Grades 10-12)

9. Which of the following best describes your understanding of the NEKMEA sight-singing audition procedures: (check one)

- ◯ I didn't know there was a sight-singing component to the audition.
- ◯ I knew there was a sight-singing component, but that is all.
- ◯ I knew there was a sight-singing component and I had knowledge of the length, key, and likely range of the sight-singing samples.
- ◯ I have attended a NEKMEA sight-singing judges' training session.

4. Please complete the following:

10. Please rate the following statements on a scale of 1-9 (1=strongly disagree, 5= neutral, & 9=strongly agree)

	1 strongly disagree	2	3	4	5 neutral	6	7	8	9 strongly agree
Sight-singing should be included as a part of the district/all-state audition procedure.	◯	◯	◯	◯	◯	◯	◯	◯	◯
My students were adequately prepared for the district/all-state sight-singing audition this year.	◯	◯	◯	◯	◯	◯	◯	◯	◯
I teach sight-singing to my choirs on a daily basis throughout the school year.	◯	◯	◯	◯	◯	◯	◯	◯	◯
I teach sight-singing to my choirs at least once each week throughout the school year.	◯	◯	◯	◯	◯	◯	◯	◯	◯
I teach sight-singing to my choirs only in the weeks leading up to the district/all-state audition.	◯	◯	◯	◯	◯	◯	◯	◯	◯

5. Please complete the following:

11. Please fill in the blank spaces using the boxes on the right for your response.

In the period of time prior to the district/all-state audition, I spend an average of_____minutes on sight-singing instruction per rehearsal.

In the remaining school year following the district/all-state audition, I spend an average of _____minutes on sight-singing instruction during rehearsals.

My rehearsals are_____minutes long.

6. Please complete the following:

12. Please indicate the frequency with which you use each of the following sight-singing systems/methods: (check one for each category)

	Always	Often	Sometimes	Never
Moveable do	◯	◯	◯	◯
Fixed do	◯	◯	◯	◯
Scale degree numbers	◯	◯	◯	◯
A single syllable (e.g. la)	◯	◯	◯	◯
Intervals by name (e.g. M2, P4)	◯	◯	◯	◯
Intervals by a "tune tag" (e.g. P4="Here Comes the Bride)	◯	◯	◯	◯
Another system or a combination of systems (please specify below)	◯	◯	◯	◯

-

13. Please indicate the frequency with which you use each of the following rhythm systems/methods: (check one for each category)

	Always	Often	Sometimes	Never
Counting	◯	◯	◯	◯
Ta-ti-ta	◯	◯	◯	◯
Neutral syllable	◯	◯	◯	◯
A single syllable (e.g. la)	◯	◯	◯	◯
Another system or a combination of systems (please specify below)	◯	◯	◯	◯

-

14. Which of the following best describes your current practices? (check one)

- ◯ I do not assess my students' sight-singing abilities.
- ◯ I assess my students' sight-singing abilities, but not with a formal assessment tool.
- ◯ I assess my students' sight-singing abilities with a formal assessment tool, but the results of these assessments are not included in my students' final grade.
- ◯ I assess my students' sight-singing abilities with a formal assessment tool and the results of these assessments are included in my students' final grade.

15. Do you teach your students to incorporate physical movement (e.g. handsigns, tap a steady beat, conducting pattern) while sight-singing? If yes, please specify below:

7. Please complete the following:

16. Briefly describe how you prepare students for the sight-singing portion of the district/all-state audition, including class time and any outside of class activities.

17. What factors do you think contributed to the success of your students who did well on the sight-singing portion of the district/all state audition?

18. What factors do you think contributed to the scores of your students who did not do well on the sight-singing portion of the district/all state audition?

Appendix B

NEKMEA Audition Procedures

1) After the audition cuts have been played in the holding area, the procedures for sight-singing will be given. Students may ask questions at this time. The procedures will also be posted in the hallways leading to the sight-singing rooms.

2) Every student will sight-sing. After completing the audition on the choir selections, students should proceed to the sight-singing room assigned to their voice part. When their turn comes, the student will enter the room and follow the procedures outlined below. Students who vary from this procedure will receive an automatic "zero" for the sight-singing score.

3) Students may not talk to anyone who has finished the sight-singing activity and they must stand far enough away from the door so they cannot hear the example being sung by the preceding student.

4) Students will enter the sight-singing room and approach the music stand, after which the CD will be started. The CD will instruct the student to remove the cover sheet and reveal the sight-singing example. Students may not write on the sight-singing example. The student will hear the Tonic triad [Do-Mi-So-Mi-Do-(low)So-Do or 1-3-5-3-1-(low)5-1] played to establish the key for the exercise, after which they may begin practicing. Students will have 45 seconds to practice the selection. Singing aloud during practice is recommended. After 45 seconds, the student will hear "Please stop." Students will hear the tonic triad again, after which they will have 30 seconds to perform the exercise. After 30 seconds, the student will hear "Please stop," and be asked to replace the cover sheet. Here is an exact script of what the student will hear when the CD is played:

A. "Please remove the cover sheet to reveal the sight-singing example."

B. Tonic Chord is played [Do-Mi-So-Mi-Do-(low)So-Do or 1-3-5-3-1-(low)5-1]. "Begin the practice period." 45 seconds to practice "Please stop."

5) Tonic Chord is played again. "Begin." 30 seconds to perform. "Please stop. Replace the cover sheet over the example and thank-you for auditioning today."

6) Student practice will not be considered as part of the rating. The student should attempt to sing the sample as correctly and as smoothly as possible. **If a student sings the example perfectly the first time, an extra "flow" point is given.** The student may attempt the exercise as many times as they wish during the 30 seconds.

Their best score will be one used for their audition. Students may NOT discuss the sample with other students or sing the exercise after leaving the room.

Important Information about the Sight-Singing Exercise

1) All exercises will be 4 measures in length, beginning on the tonic.

2) Exercises for each of the four parts will be different, tailored to the appropriate range of the part.

- Soprano in E-flat Major
- Alto in D major
- Tenor in E-flat Major
- Bass in D Major

3) All exercises will consist largely of stepwise melodic material with a few leaps of the third, fourth or fifth. Basses may expect the cadential octave.

4) All exercises will be diatonic, that is, in the key specified without accidentals.

AUDITION PROCEDURE

REPERTOIRE

Three audition selections are indicated on the District Repertoire link. The audition pieces are bolded; students should fully prepare all three of these selections for the audition.

AUDITION BLOCKS

Students and chaperones should report to the Baldwin Junior High School auditorium on Saturday, November 8th, at the time indicated for their school on the "Audition Times" link. Students should bring audition music and a pencil. Dress is casual. Packets containing the cuts, final instructions and student audition numbers will be available to directors at the registration table in the lobby 30 minutes prior to the audition block.

REGISTRATION

Teachers will distribute audition numbers to their students. Students will then move into the auditorium to receive instructions, and to hear a recording of all audition passages. Students should be prepared to mark the excerpts in their scores at this time. After the excerpts for each part have been played, students will be called by number, and escorted to the audition rooms. Once students are in the auditorium for instructions, teachers should report to their assigned workstations.

AUDITIONING

Auditions are blind; students will not see judges, and judges will not see students. No student should speak, or move into the view of judges, while in the audition room. The door monitor will announce the student's audition number. The audition is performed with a CD that plays all parts on a piano. I STRONGLY RECOMMEND THAT YOU PROVIDE YOUR STUDENTS WITH THE REHEARSAL CD. THERE ARE NO VOICES SINGING ON THE CD. Three judges will individually rate the student's performance. Rating sheets will not be available to teachers or students. Students will then move to the designated room for their sight-singing portion of the audition. If you have a student who is visually impaired, please contact the high school vocal chair prior to the audition so the necessary accommodations can be made.

RESULTS

Audition results for the KMEA Northeast District choir will be posted on the district website by Monday morning. Results for all statewide festival groups will be posted on the state website in late December.

District: www.neksmea.org
State: www.ksmea.org

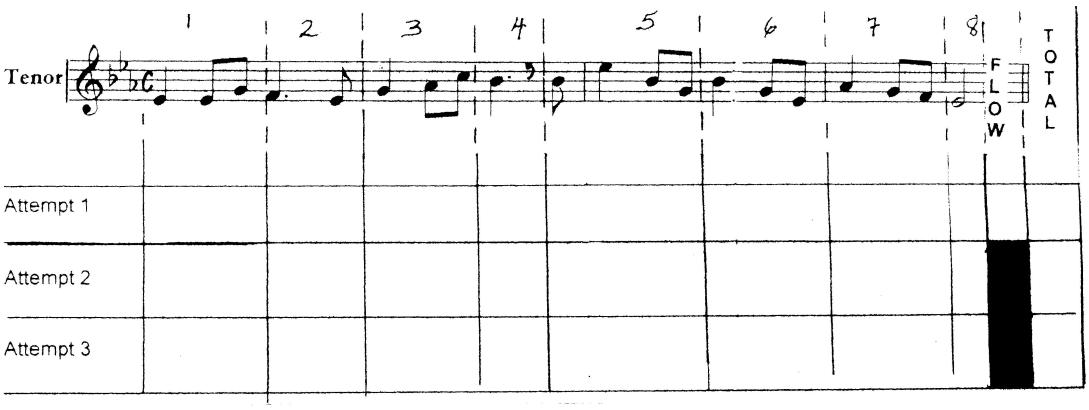
PARTICIPATION IN DISTRICT CHOIR

Two additional pieces will be performed by the Northeast District Choir and will be listed in the District Repertoire link. These additional District choir selections must be quickly prepared for December 6th, once district audition results are announced. This requires teachers to be organized in ordering music and scheduling their own school rehearsals. Please do not bring unprepared students to the district mini-convention.

Students must fully participate in the district mini-convention on Saturday, December 6th in order to remain eligible for the Statewide Festival Choir in February. This includes being on time for all rehearsal sessions, behaving in a professional manner, and remaining in attendance for the duration of the district concert.

Appendix C

Sample Judge's Rubric



_____ Raw score

_____ X 3

_1_ Student has made an attempt to sing.
(Circle this item.)

_____
(Judge number)

Appendix D

Initial Survey Email

(First name),

I am a graduate student at the University of Kansas completing an investigation of sight-singing instructional methods as part of my degree. Specifically, this study seeks to find possible relationships between your instructional methods and sight-singing scores from the November 9th district/all-state auditions.

Your participation, while greatly appreciated, is completely voluntary. Please understand that your survey responses and sight-singing scores will be coded to retain complete anonymity for you and your school. The research findings will not contain any information that identifies participants or their schools.

The following online survey should take less than fifteen minutes to complete. Please take your time and answer each question candidly. Below you will find a link that takes you to the survey.

http://www.surveymonkey.com/s.aspx?sm=L_2bmFsjR35RgwJNFOu7s0kA_3d_3d

Thank you for your time and participation. Please contact me if you have any questions.

Sincerely,

Adam White
785-845-5520
whiteadaku@gmail.com

Appendix E

Follow-up Survey Email

(First name),

I really need your help. About two weeks ago I sent you an email asking for your input on a project as part of my graduate work at the University of Kansas. Unfortunately, I haven't received enough responses to complete that project. Your participation is voluntary and will remain anonymous. I am told the survey takes less than 10 minutes to complete.
Click on the link below:
http://www.surveymonkey.com/s.aspx?sm=L_2bmFsjR35RgwJNFOu7s0kA_3d_3d

Thank you for your time and participation. Please contact me if you have any questions.

Sincerely,
Adam White
785-845-5520
whiteadaku@gmail.com

Appendix F

Responses to Survey Question 16

1) Daily sight singing as part of rehearsal in class--- group sight singing, or cooperative groups according to section; individuals auditioning for state–I check out a copy of 90 Days to Sight Reading Success to them and they work in the specific keys they will encounter at the audition outside of class.

2) We have Jenson's Sight-Reading Books – we do some examples from there. We also use the examples from NEKMEA – which are supposed to be similar to what they will see at the District/State Choir Audition. This is my first year at this school and I only had them sight-read in the weeks leading up to Auditions. At my old school, we did it everyday – but that was because they were used to doing it everyday and they were more successful than my current students.

3) I use numbers and we sing various intervals. I also give sight-singing examples and we sing using numbers and work on intervals as we go along in the example.

4) We prepare daily in class using examples in all keys as well as examples in the keys of the audition material. Each 5 minute sight-singing practice involves identifying "do" through key signature, hearing do, establishing the key (do mi so mi do so do re fa la fa re ti do), 30 seconds of practice individual practice time, and a read-through of the example. We then identify difficult areas and review them as needed. We do this as a class and individually. Students are welcome to seek outside of class help, but it is not required.

6) No response

7) I use a Masterworks Press Sight-singing catalogue plus any examples from KMEA plus some that I make up.

8) I give my students samples from the previous auditions. I have written my own samples and found samples in the appropriate key. I teach them to sing do mi so mi do so do to find the tonal center. Then I have them practice for 45 seconds and per form for 30 seconds.

9) I present a sightsinging excercise. We identify keysignature, we then write in syllables then clap then sing the excercise. In our specific practices for state we look through the examples given on the KMEA website.

10) I don't. The students are on their own. The only time they get sightsinging is in class unless they do it on their own.

13) We sight-sing using the Oxford Folk Singing Series throughout the year. For those students auditioning for district/all state, I write sight-singing exercises in their specific key for them to practice with. Each student finds time with me after school to sight-sing alone in front of me. I then have sectional after-school rehearsals so they sight-read in front of each other as well. For my examples, I use old sight-singing excerpts previously used, and I write my own as well. I put them on Finale, and print them out for each voice part.

14) We sight-sing practice materials together and I give them the materials to go home with.

15) We practice single line exercises of a similar length and difficulty, both as a class and individually. We also use our sol-feg syllables in learning our choir music. At times we will operate using the exact times for studying and performing that are used at district auditions.

16) Copies were provided of previous years' examples from the website, and we worked through all of those in class.

17) On a daily basis, I alternate sight-singing activities with theory activities usually at the beginning of class during the warm-up. When starting a new piece or section of a song, I always have my students sight-sing it so they can make some informed calculations about what's going to be challenging, what melodic or rhythmic patterns are repeated, and what they think might be easy.

18) The students in my school who audition have (so far) always also been band members. Their instrumental music experiences have been extremely helpful to them. Also, I tend to focus on examples in Eb and D in the weeks prior to auditions. This helps the eyes, ears, and vocal mechanism begin to adjust since all of the required sight-singing excerpts are in these keys.

19) We spend time going through basic to similar examples found at the audition. We look at examples taken from various sight reading authorities (for ex. Jensen's Blue Book)

20) I try to work daily with the students on sight singing during choir. We spend about 10 minutes a day and work on a page at a time. I also work individually with students in the weeks prior to district audtions.

21) examples on-line and from text

22) I usually work one-on-one with them. I go through the experience with them. I give them sight singing examples, and give them "90 days to sight reading Success" for individual study.

23) Review intervals, melody passages, rhythm patterns and use moveable do.

25) Put different exercises in the keys on the board and have them sight-sing and use the examples from district/all state audtion examples, too. We all s/sing each others parts/keys. I use melodica and 2 books to practice, but I'm not as faithful as I should be. I just haven't found a wonderful method.

26) We go through exercises in class, but don't increase the practice time prior to district because I don't have a lot of kids that audition.

27) Classwork on reading exercises in the correct keys for their audition. Counting and clapping exercises.

28) Other than going over the rules and procedure I don't specifically prepare them for the dist/state audition. I teach them to sight-read so they are better musicians.

29) I make up a sheet of sightreading exercises in the key for each voice part. We sightsing together as an ensemble as well as individually.

30) This is the first time since they instituted sight singing that I have had students interested in attending the auditions. A couple of weeks before auditions I gave students samples of similar examples. They were able to take them home and come in during seminar to work on. I did use some of my current sight singing time to work on these, but not any extra.

31) Sight reading should directly realte to the music you are studying. I have the students learn their music by sight reading a section of the music we have not learned. They may write in the solfege syllables if necessary as we are a program that is just beginning to practice this skill. Each section practices independently of the others. Chanting the syllables in rhythm then adding singing on solfege. Then we put the two parts together on syllable. After it works twice we add words.

32) In addition to sight singing at the beginning of rehearsals, individual students take turns at mock sight-singing auditions.

33) Daily, systematic sight singing; discussion of sight singing strategies; listening to sight singing examples and identifying errors heard. Hand sign "calisthenics" – I establish "do" – then have them sing the intervals indicated by the hand signs I demonstrate. I use these to drill awkward intervals prior to sight singing printed melodies.

35) Go over the sight singing procedure. Show examples from previous years. Copy and hand out examples of previous years for practice. Make additional sight singing examples and/or use other sight singing methods to augment..

36) I begin the year with group sight reading in class. I use the number system with a moveable DO. UI use a variety of resources for sight reading. Because I am working on the musical during the same time I cannot get many students to participate in district auditions.

37) We practice the specified keys in class during weeks leading to those auditions. Much takes place with individuals outside of class. Those auditioning go through the timed procedure, practicing sample exercises alone.

39) We use a sight singing book. In the days/weeks before district the students are required to perform a random exercise “cold” by themselves. Part of our warm up time is dedicated to sight singing, but during this time before districts is the only time I put students “on the spot” for these exercises.

40) I use a book called “Sing at First Sight” by Andy Beck, Karen Farnum Surmani, and Brian Lewis. That’s used during class. During my before-school rehearsals for auditions, we practice the sight singing examples.

41) Use of many short phrases – then sight-singing patters of 2-4 lines

42) We practice longer melodic examples than those written for the audition, usually 8 measures with increasingly more difficult intervals and rhythms. We also rehearse previous yearly examples of the audition selections and eventually sight read in 3 and 4 parts. Always acappella, sometimes on solfege, neutral syllables (la) or with written text if it is a published sight-reading example in parts. (Southern Music Sight Reading collections for Male, Treble and Mixed Voices–Multiple volumes of each voicing.)

44) We sight read on a weekly basis, sometimes more often using the sing at first sight series. I give individual students the practice sight reading amples and meet with them as a group after school. In addition, I encourage them to use their church hymnals at home for additional sight reading practice.

45) Same procedure throughout the year. Daily exercises out of a sight-singing book. This year, I described the NEKSMEA process to the choirs and used the sample exercises that Dr. Dunn presented us.

46) All students sight read as part of daily class. No special training is given to those auditioning.

47) work on old examples plus the on line examples

48) I have them sightsing practice samples in front of the class and I time them. As a class, we sightsing samples in all different keys, but I specifically work the "audition keys" with each student.

49) Daily use of the Hemmenway sight-singing books; occasional use of previous Kansas all-state sightsinging samples; occasional use of other all-state sightsinging samples.

50) Explain the process

51) The only difference between preparing them for the audition as opposed to normal class sight singing activities, is listening to individuals perform alone more frequently.

Appendix G

Responses to Survey Question 17

1) My students didn't do that well, but the success they had was due to daily sight reading, and the development of a tonal concept.

2) Practice

3) Those students that spent outside classroom time on sight-singing and interval training.

4) 1. Accumulation of years of solfege practice, or at least, a few months. 2. Consistent use of solfege throughout the year in previous years of choir builds knowledge and comfort with the system. 3. Mainly, knowing and USING the system.

6) No response

7) The students who also play an instrument and/or piano usually score well

8) I find that my students who do well are also instrumentalists. The best readers almost always have piano background.

9) Instruction in the classroom. Also, many of the excellent sightreaders are also pianists.

10) They focused and took sightsinging seriously during class and took some time to practice the process on their own.

13) I think it helps for them to have their sight-singing to practice in the key they will actually read in, as well as having the basses reading on the bass clef. They also sing in front of me, which scares them a bit, so they won't be scared to sing in front of some mystery judge at auditions.

14) Natural ability combined with a good background in private vocal studies.

15) Repetition and the ability to find the difficult portions of the example quickly and spend the majority of the study time working on the difficult spots.

16) Practice daily in rehearsal.

17) No response

18) Band (orchestra, piano, etc.) experience combined with daily solfege activities.

19) The students that did well on the sight reading portion of the audition are also involved in band (playing wind instruments) as well as choir. I believe the constant reinforcement improves students abilities to sight read.

20) I don't think my students did well on the ss portion. I plan to make sure I consistently work on ss during every choir rehearsal.

21) hard work

22) Preparation, there own musical ability, and a little luck.

23) Their willingness to work hard and practice. They handled the pressure of the audition much better than the other students.

25) They came in for extra time with me during charger time and really worked on it in class.

26) They were average. Although since incorporating this system last year, the students got a little better.

27) They already read music well, usually because they also play an instrument.

28) They were in their ability to sight-read and clearly understood the instructions of that specific audition. They were also clear on the basic concepts that their sight-reading example would cover (eg. Key, common intervals and rhythms)

29) I believe the students who are instrumentalists are our best readers. The students who are confident with intervals do well.

30) They worked on it on their own and took seriously the instruction in class.

31) The underclassmen have had sight reading at both the middle level and high school levels. These students have been my leaders the past two years and are more willing to try to sight read as they were successful in middle school and know the benefits of sight reading.

32) Probably the mock auditions. Students got a number of practice drills.

33) Daily practice in and out of class, good ear, good mental focus to strategies discussed, good sense of rhythm.

35) Daily sight singing in class every day during the warm-up/sight singing at the beginning of the period. Count singing new music until they get it. Introducing and using solfege and hand signs during the warm-ups creates familiarity and comfort with syllables. Using solfege when sight singing and doing warm-ups. Using hand signs, mostly during the warm-ups. Trying to learn new music without the piano as a crutch.

36) These students have private voice lessons and have private piano lessons.

37) Instrumental training, natural ability, dedication to practicing methods taught in choir, self-confidence

39) My students did poorly overall. We re-tooled how we approached the sight singing portion. This was also the first time in three years we have participated so many of my students (even though they were told) did not think the sight singing would “be a big deal”.

40) Those students who are involved in different areas of music fare better than those who don’t. (ie students who are also in band or take piano lessons,etc.)

41) Musical foundation on instruments over a long period of time, giving a concrete picture of what they’re doing with their voice.

42) Individual motivation, continued practice at school and a lot of effort outside of class. Sometimes with an individual voice teacher as well.

44) Practice and training for the upperclass who don’t have piano training, other wise, I find the most successful are piano students.

45) I’d only been teaching at Baldwin a few months before the NEKSMEA audtion. Whatever success they had was probably due to their own talents, work, or previous teacher.

46) Continual practice, and the establishment of tonality as the framework.

47) talent

48) A LOT OF PRACTICE Also, singing in front of the class even if making mistakes, can be a good learning tool for everyone.

49) Consistent practice; encouraging the students to have and incorporate a definite plan for sightsinging.

50) Playing an instrument

51) They just get it! They are intelligent and have a good ear.

Appendix H

Responses to Survey Question 18

1) The absence of a background in sight reading. It's my first year at this school. Previously, sight reading was not emphasized as much, and is not a skill that is mastered in junior high, therefore some are learning the system still, the audition is in the fall, so the routine and methods are relatively new to my students. This should be less of a factor next year with my returning students.

2) Lack of practice

3) Those students who struggle with pitch in general and also who didn't work on sight-singing outside of class.

4) Refusal or inability to use the solfege system and trying to go forward without a system.

6) No response

7) Fear as well as the time limit as well as the fact that I need to spend more time on a daily basis besides right before the audition.

8) These kids are usually not instrumentalists and they just don't get how to read music. Instrumentalists have to put a finger down to make a note on their instrument. Vocalists tend to guess where the pitch should be instead of knowing or figuring out where the pitch is.

9) Nerves and the first time trying for All-State

10) Opposite of the above. Perhaps we can spend a little more time on sightsinging techniquess. However, time is of the essence when you meet every other day and you're performing 25-40 performances a year mingled with all the state and district assessments. We must be prepared to perform at all times.

13) Nervousness, as well as they got caught up on a measure, and couldn't get past it.

14) Lack of experience and lack of confidence in their singing ability.

15) Constantly starting at the beginning rather than looking for the difficult spots. Setting a tempo that is too fast. Missing an interval without recovering. Losing track of their sol-feg syllables and not substituting a neutral syllable fast enough.

16) Not mastering the sightsinging in rehearsals either, due to lack of interest or other reasons, which I do not know.

17) No response

18) At the risk of seeming rude regarding the students who are not strong sight-singers, acceptance into a KMEA ensemble should be a special honor for select musicians. Sight-singing is a skill that takes considerable time and musical experience to develop and, in my opinion, is one of the most critical components to this audition. (Actually, I think it should be weighted more heavily.) There are many good singers out there, and given that they have access to learning CDs, it's likely that some learn their music solely by rote. Sight-singing is probably the most efficient means to screen the auditioners and ensure that the strongest and most deserving musicians are accepted.

19) Most of these students rely on their ears rather than what they see, and either refused to apply what we use in class as preparation or just frankly got scared.

20) As we near a performance date, there are times when I do not do the sight singing portion of class to save time. I have seen the problems that caused and will not do that next year.

21) nerves

22) Lack of preparation.

23) They didn't take it seriously and "freaked out" at the audition.

25) Just couldn't get it or got nervous.

26) None of my students have had any prior sight reading experience in the grade school level. And most of my students don't have much education regarding music.

27) Some were brand new to sightreading in choir. Others weren't taught how to analyze a sightreading passage and sing it.

28) They confidence in their ability to sight-read in general lacked. If you were to ask them they would say, "I don't sight-read well" or "I can't sight-read." Adding in the pressure of the audition makes their level of confidence drop even further. They have yet to realize that sight-reading for the audition or otherwise is a skill that they can learn. We too often treat sight-reading like many people treat math..."I'm not got at math". Those who are successful sight-readers either have adequate musical skill or have embraced the system they are taught.

29) Students who lack trust in their skills and who doubt their preparation usually suffer most.

30) I do not have a plan for assessment in place, therefore many of the students do not apply themselves to learning the system I use. Need to explore other ways of teaching/assessing in order to have students learn the system I implement. Also, I have not focused on sight singing at the high school level as much in the past years as I have this year. It is one of my professional smart goals this year.

31) The upper classmen have not had much experience in sight reading. I am the first instructor to introduce the concept at the high school in several years. The students who have had multiple instructors do not see the benefit of sight reading as it is easier for them to learn by rote. They can do the work, but it is tedious trying just to remember the solfege syllables and then transfer the system to the notes on the page.

32) There was a correlation between how serious the students took the instruction and the drills, how often they took the mock audition, and how they did in the actual audition.

33) Lack of practice outside of class. Failure to connect with strategies discussed, poor rhythm reading, "late start" (did not really do much sight reading until high school).

35) Lack of attention and preparation during sight singing in class. Nervousness at the audition. Over confident (thinking they understood the sight singing better than they actually did) Insufficient individual practice.

36) I do not always bring my best students to auditions. They lack the confidence and the whole process freaks them out.

37) Failure to come in for individual help, lack of confidence, not taking the sight-singing portion seriously, struggles in general with all kinds of reading

39) Part of this is educator (ME) not preparing my students well enough. The sight reading we did to pre-pare was to rudimentary to adequately prepare all of my students. Those students who sight read better "naturally" did better, those who struggle REALLY struggled under the pressure. My students did not feel comfortable "rehearsing" the melodic lines outloud, which is a big disadvantage. Rhythmically my students did well, skips DOWN proved to be problematic. Another factor, for my students, is the "Large fish, Small pond" syndrome. My kids assume that because they are "good" at our HS, they wouldn't have any problems at the district audition. Again, though, this was the first time in three years we have had

students audition, so not only were the students “fresh” to all of this, their teacher was also a little out of the loop.

40) Probably those students who don’t focus and really pay attention when we use our sight singing books.

41) Lack of confidence and belief that they can do it – lack of keyboard or other instrument background

42) Lack of personal discipline, confidence issues, nervousness at the audition, weak rhythm and interval skill mastery. Lack of focus during the actual audition.

44) Their lack of confidence in interval jumps, or their failure to trust the solfege system and reverting to one syllable.

45) ?

46) Lack of years of training: some students are older when they begin sight-singing, which some research suggests is a hinderance (See Kopiez and Lee’s article in Music Education Research). These were older students who were not taught to sight-sing early on. There are times when the harmonies implied by the examples are a little bizarre.

47) not gifted in that area

48) Not using the practice time effectively- possibly humming during the practice due to nerves.

49) These students had the tools in place to succeed. However, they did not formulate and incorporate a plan for sightsinging when they entered the audition room.

50) Lack of sight-reading experience

51) They just don’t get it. Typically, they just don’t have as good of an ear

Appendix I

Responses to Survey Question 15

1) hand signs, tap steady beat

2) Yes, Curwen hand signals

3) No response

4) Handsigns or conducting

6) No response

7) No response

8) I have taught handsigns, but most of the kids are not comfortable with it. They do not learn the solfege system until they get to me.

9) Yes, handsigns and clapping and conducting

10) Yes, I teach using the hand signs, as well as tapping toes while singing notes as they sight sing.

13) The students must use Curwen hand-signs when they sight sing. They each sing three scales per semester in front of me by themselves, while using the hand-signs, and they receive a grade for this assignment. When we are singing through rhythm cards, I ask for the kids to physicalize the beat using their middle finger on their dominant hand, and tapping their collar-bone area to keep the beat while they count.

14) no

15) Yes, I encourage students to keep a physical beat or use hand signs while sight-singing.

16) Hand signs sometimes.

17) Yes. They consistently tap the beat while sightsinging. We use handsigns when struggling with intervals.

18) No.

19) Yes, tapping steady beats.

20) Handsigns, tapping a steady beat

21) handsigns

22) I do seldomly, using a wide variety of methods.

23) Sometimes

25) We do hand signs daily, tapping either hands or feet and we conduct

26) handsigns

27) No response

28) We you the koday handsigns. We keep the be with our hand signs.

29) Handsigns, conducting pattern

30) Sometimes – Steady beat and conducting pattern.

31) I have them keep steady beat by tapping two fingers on the leg or on the opposite shoulder. Sometimes I have the use the conducting patter that matches the time signature. We use solfege hand signals at times as well.

32) Yes. All of the above.

33) Hand signs, tapping, conducting

35) handsigns sometimes

36) No response

37) Handsigns, tap a steady beat, clapping rhythms

39) tapping on the leg or tapping of the foot to keep the beat. We have begun experimenting with beat patterns as well.

40) Hand signs and tap a steady beat.

41) Hand conducting while singing.

42) Solfege hand signs for the diatonic major scale.

44) Tap a steady beat, conduct pattern and use of hand signals are all used, sometimes marching or clapping in groups against each other.

45) Sometimes.

46) Curwin hand signs for solfege syllables, and tapping a steady beat for rhythmic accuracy.

47) yes hand signals

48) teach them various conducting patterns so that their rhythm is improved when they have mastered the pitch in sightsinging examples.

49) No response

50) No response

51) In the beginning, we use Kodaly hand signs then stop using them as we progress. Occasionally, students tap the beat during difficult rhythm passages.

Appendix J

Human Subjects Approval

KU
The University of Kansas

4/23/2009
HSCL #18026

Adam White
1123 SW Collins Ave.
Topeka, KS 66604

The Human Subjects Committee Lawrence reviewed your research update application for project

18026 White/Daugherty (MEMT) Relationships Among Hish School Choir Teachers' Self Described Teaching Pratices and Sight-Singing Scores from a District/All-State Audition Event

and approved this project under the expedited procedure provided in 45 CFR 46.110 (f) (7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Since your research presents no risk to participants and involves no procedures for which written consent is normally required outside of the research context HSCL may waive the requirement for a signed consent form (45 CFR 46.117 (c) (2). Your information statement meets HSCL requirements. The Office for Human Research Protections requires that your information statement must include the note of HSCL approval and expiration date, which has been entered on the form sent back to you with this approval.

1. At designated intervals until the project is completed, a Project Status Report must be returned to the HSCL office.
2. Any significant change in the experimental procedure as described should be reviewed by this Committee prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at http://www.rcr.ku.edu/hscl/hsp_tutorial/000.shtml.
4. Any injury to a subject because of the research procedure must be reported to the Committee immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity. If you use a signed consent form, provide a copy of the consent form to subjects at the time of consent.
6. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.

Please inform HSCL when this project is terminated. You must also provide HSCL with an annual status report to maintain HSCL approval. Unless renewed, approval lapses one year after approval date. If your project receives funding which requests an annual update approval, you must request this from HSCL one month prior to the annual update. Thanks for your cooperation. If you have any questions, please contact me.

Sincerely,

Mary Denning
HSCL Coordinator

cc: James Daugherty